UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

MEMORANDUM

DATE:
SUBJECT: Determination of Need for an Investigation
Facility Name: Premcor Refining Group, Inc.
EPA ID #: ILD 005 109 822

FROM: Kathleen Miller
Kathleen Miller, Environmental Protection Specialist

TO: George Hamper, Chief, Corrective Action Section 2

I recommend the following determination regarding the need for an investigation:

☒ **CA070NO** Determination of Need for an Investigation-Investigation is not Necessary

Reason for Determination

- ☐ Preliminary Assessment/Visual Site Inspection (PA/VSI) did not recommend any further investigation
- ☐ PA/VSI recommendations do not warrant RRB attention
- ☐ Phase 1 Environmental Site Assessment (ESA) did not recommend further investigation
- ☐ Phase 2 ESA did not recommend further investigation
- ☐ Phase 1/Phase 2 ESA recommendations do not warrant RRB attention
- ☐ Company representative asserts that the site is clean
- ☐ Not subject to corrective action
- ☒ Enrolled in other clean-up program
- ☐ PA/VSI recommendations have been implemented
- ☐ Superfund Removal
- ☐ Participating in Voluntary Remediation Program
- ☐ Completed Voluntary Remediation Program
- ☐ Superfund Remedial Action
- ☐ Superfund No Further Action Decision
- ☐ Superfund Base Relocation and Closure
- ☐ Other_____

☐ **CA070YE** Determination of Need for an Investigation – Investigation is Necessary

Reason for Determination

- ☐ PA/VSI recommends further investigation
- ☐ ESA recommends further investigation
- ☐ Other_____

☐ **No determination can be made** – More Information Needed

☒ Approved ☐ Not Approved

Signed: George Hamper Date: 9/24/10

MEMO

To: File
From: Kathleen Miller
Date: 9/9/10
RE: Premcor Refining Group, Inc. (EPA ID# ILD 005 109 822)
* new owner: Valero

Summary of Phone Conversations:

On September 8, 2010, I called the contact person, John Tenison per RCRA Info and was given his cell phone number because he was out of the office. I spoke with Mr. Tenison and was informed that the refinery at the Blue Island facility was shut down in 2002. Premcor Refinery was bought out by Valero which is currently a petroleum marketing terminal. When the refinery was shut down, the tanks were removed from the property. As far as remediation activities, Premcor and the State of Illinois entered into an Agreed Consent Order on March 16, 2004 for Remedial Investigation/Feasibility Study (RI/FS) and Site Investigation at the Premcor Blue Island facility. I asked if I could obtain a copy of this documentation for our records. Mr. Tenison was very willing to provide me with anything that would help update our files. He stated that Thomas Mroz, the environmental manager, will be calling to provide me with the documentation and to answer any other questions I may have. A few minutes later, Mr. Mroz called me and informed me that the Blue Island facility is involved in CERCLA type clean-up activities leading to a Record of Decision (ROD) and an Administrative Record. He was very willing to send me the consent order and the latest RI/FS report via email. Soon after our conversation, I received the consent order, their last monthly RI/FS report submitted to IEPA as well as a submittal register. (* I did not print the complete consent order- 87 pages.)

I was informed by George Hamper, that if a company representative tells me that the site is involved in a clean-up program (in this case, Premcor is in a **required IEPA (CERCLA type) remediation program under consent order**) this is a reason to determine a CA070NO- no further investigation is necessary.

Updated contact info for this facility:
Valero (formerly Premcor Refining Group)
13100 S. Kedzie Ave.
Blue Island, IL 60406

John Tenison, Facility Manager
210-345-4665
210-287-4665 (cell)

Tom Mroz, Environmental Manager
708-385-9513
thomas.mroz@valero.com

RE: U.S. EPA request for updated info re (EPA ID# ILD 005 109 822)
Mroz, Thomas
to:
KathleenA Miller
09/08/2010 03:48 PM
Show Details

Good Afternoon Kathleen – Please find attached a copy of the consent order with the State of Illinois for the site. The Consent Order was entered on March 16, 2004. I've also taken this opportunity to provide our last monthly report (July) to IEPA along with our submittal register – providing a list of document submitted on this project. Hopefully you will find the attached information useful. Please don't hesitate to contact me should you have any further questions at 708-385-9513.

Thank You,

Tom

From: Miller.KathleenA@epamail.epa.gov [mailto:Miller.KathleenA@epamail.epa.gov]
Sent: Wednesday, September 08, 2010 11:31 AM
To: Mroz, Thomas
Subject: U.S. EPA request for updated info re (EPA ID# ILD 005 109 822)

To Mr. Mroz:

Per our phone conversation today, I am emailing you our request for updated information regarding remediation activities at the Premcor Refining Group (now Valero), Blue Island, IL location. You offered to provide our office with the Agreed Consent Order entered in March of 2004.

I look forward to receiving the documentation!
Thank you for your assistance.

Kathleen Miller
Environmental Protection Specialist
RCRA Corrective Action
U.S. EPA Region 5
77 West Jackson Blvd. LU-9J
Chicago, IL 60604
312-886-6761
Miller.KathleenA@epa.gov

IN THE CIRCUIT COURT OF COOK COUNTY, ILLINOIS
COUNTY DEPARTMENT, CHANCERY DIVISION

PEOPLE OF THE STATE OF ILLINOIS, *ex rel.* LISA MADIGAN, Attorney General of the State of Illinois,	)	
Plaintiff,	)	
-vs-	)	No. 04CH01571
THE PREMCOR REFINING GROUP INC., a Delaware corporation,	)	
Defendant.	)	

* Did not print the whole thing - 87 pages

CONSENT ORDER FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY AND SITE INVESTIGATION

I. BACKGROUND

A. The People of the State of Illinois, *ex. rel* Lisa Madigan, Attorney General of the State of Illinois, on behalf of the Illinois Environmental Protection Agency ("Illinois EPA") (together, the "State"), filed a complaint in this matter pursuant to Sections 12(a), (d) and (h) and 22.2(f) of the Illinois Environmental Protection Act ("Act"), 415 ILCS 5/12(a), (d) and (h) and 5/22.2(f) (2002), against The Premcor Refining Group, Inc.

B. The State in its complaint seeks, *inter alia*: (1) reimbursement of costs incurred by Illinois EPA for response

actions at the Premcor Blue Island facility (as defined below); and (2) an order requiring Premcor to perform a comprehensive remedial investigation of the Premcor Blue Island facility to determine the nature and extent of contamination and to submit to the State a proposal for remedial alternatives based on the results of the remedial investigation and to remediate soil and groundwater contamination at and around the Site.

C. The Illinois EPA is an administrative agency established in the executive branch of the State government by Section 4 of the Act, 415 ILCS 5/4 (2002).

D. At all times relevant to this Complaint, Defendant, The Premcor Refining Group, Inc. ("Premcor" or "Defendant"), was and is a Delaware corporation doing business in the State of Illinois.

E. Premcor, formerly known as Clark Refining and Marketing, Inc., a Delaware corporation, currently owns and operates tank farms and a bulk terminal and leases and operates a marine dock facility at 131st Street and Kedzie Avenue, Blue Island, Cook County, Illinois ("Blue Island facility" or "Site"). Premcor formerly owned and operated an oil refinery at the Site.

F. The Blue Island facility ceased operations as an oil refinery in January 2001. However, Premcor continues to operate the tank farms, the bulk terminal, the marine dock operations and a waste-water treatment plant on portions of the Blue Island

facility.

G. The Blue Island facility is generally surrounded on the north by 127th Street and Eisenhower High School, on the south by the Calumet Sag Channel and residences, on the west by an industrial area, and on the east by residences.

H. The Blue Island facility consists of seven identifiable areas, which are:

Area 1. Northwest property

Area 2. West property

Area 3. Northwest Terminal

Area 4. Southwest Terminal

Area 5. Triangle property (main refinery)

Area 6. Administration offices

Area 7. Parco Foods property (aka the Cookie Factory)

I. The tank farms at the Blue Island facility contain tanks of varying sizes which are located at the Northwest and Southwest Terminals. Defendant uses or used these tanks for the storing or transferring of crude oil, petroleum and petroleum products including gasoline.

J. From at least 1992, releases of caustic solutions, fluid catalytic cracker spent catalyst, asbestos, gasoline, oil and other petroleum products reportedly occurred, and may be continuing to occur, at the Blue Island facility.

K. An investigation confirmed that free product is present

on the groundwater table in the area of the tank farms, Administration offices, transfer pipelines and truck loading dock.

L. Groundwater and soil samples taken by Premcor at the Blue Island facility found petroleum products and other chemicals.

M. In 1991, as a result of releases from the Blue Island facility, the State filed a complaint which was subsequently amended five times to include additional releases. On September 9, 1998, the United States filed a complaint against Premcor. The State filed its complaint in intervention of the federal case on April 27, 1999. A Consent Order was entered in the cases filed in state court on April 8, 2002 and in the federal case on June 12, 2002. These Consent Orders settled alleged liability for air pollution violations and for operation of the tank farms at the Site only. The Consent Order entered in the State case specifically reserved all rights with respect to claims relating to investigation and/or remediation of any area or media impacted by spills or releases of contaminants at or from the Blue Island facility, at or from the site of the Midlothian Creek pipeline release, or at or from the Site of the Burnham, Illinois pipeline release.

N. In order to address the releases to land and water, Premcor shall perform a remedial investigation and feasibility

study ("RI/FS") at the Blue Island facility on Areas 3, 4 and 5 of the Site pursuant to the RI/FS Statement of Work set forth in Attachment A. Premcor may perform an RI/FS on one or more of Areas 1, 2, 6 or 7 if the Illinois EPA finds that information provided in the Site Investigation Report (as defined below) demonstrates the need for further investigation and remediation.

O. Premcor shall perform a site investigation of Areas 1, 2, 6 and 7 pursuant to the Site Investigation of the Potentially Unimpacted Areas: 1, 2, 6 and 7 ("Site Investigation") Statement of Work, set forth in Attachment B. Based on the results of the Site Investigation, the Illinois EPA shall determine whether any of Areas 1, 2, 6 or 7, or any portion of those areas, shall be remediated in the RI/FS process (outlined in Section V.7.a. herein) or whether any of the areas qualify for a Site Investigation Certification of Completion pursuant to Section XXV.

P. Based on the information presently available to Illinois EPA, Illinois EPA believes that Premcor will properly and promptly conduct the RI/FS and Site Investigation (together, the "Work") if conducted in accordance with the requirements of this Consent Order and its appendices.

Q. Premcor does not admit any liability to the Plaintiff arising out of the transactions or occurrences alleged in the complaint, nor do they acknowledge that the release or threatened

release of hazardous substance(s) at or from the Site constitutes an imminent or substantial endangerment to the public health or welfare or the environment.

R. The Parties agree that in any judicial action taken under this Consent Order, judicial review of any issues concerning the adequacy of any response action taken shall be limited to the administrative record. The Parties agree that the Work to be performed by Premcor shall constitute response actions.

S. The Parties recognize, and the Court by entering this Consent Order finds, that this Consent Order has been negotiated by the Parties in good faith and that implementation of this Consent Order will expedite the cleanup of the Site and will avoid prolonged and complicated litigation between the Parties, and that this Consent Order is fair, reasonable, and in the public interest.

NOW, THEREFORE, it is hereby Ordered, Adjudged, and Decreed:

II. JURISDICTION

1. This Court has jurisdiction over the subject matter of this action pursuant to Sections 42(d) and (e) and 22.2(f) of the Act, 415 ILCS 5/42.(d) and (e) and 5/22.2(f). Solely for the purposes of this Consent Order and the underlying complaint, Premcor waives all objections and defenses that they may have to

STATEMENT OF WORK
FOR
REMEDIAL INVESTIGATIONS AND FEASIBILITY STUDIES
The Premcor Refining Group
Clark Blue Island Facility

I. PURPOSE

The purpose of this remedial investigation/feasibility study ("RI/FS") is to investigate the nature and extent of contamination at the Premcor, Clark Blue Island Facility Site, to develop and evaluate remedial alternatives, as appropriate, and to perform additional investigative studies, such as treatability studies, necessary to complete this phase. Premcor shall furnish all necessary personnel, materials, and services needed for, or incidental to, performing the RI/FS, except as otherwise specified herein. Premcor and their consultants shall conduct the RI/FS in accordance with the "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA" (U.S. EPA, October 1988), "Guidance on Conducting Non-Time Critical Removal Actions Under CERCLA" (U.S. EPA August 1993), "Guidance for Data Usability in Risk Assessment" (OSWER Directive #9285.7-05), and the guidance referenced therein, as may be amended or modified by EPA.

II. SCOPE

The specific RI/FS activities to be conducted at the Premcor, Clark Blue Island Facility Site, are segregated into 14 separate tasks.

- Task 1--Project Planning
- Task 2--Community Relations
- Task 3--Field Investigations
- Task 4--Sample Analysis/Validation
- Task 5--Data Evaluation
- Task 6--Risk Assessment
- Task 7--Treatability Studies
- Task 8--RI Report
- Task 9--Remedial Alternatives Development and Screening
- Task 10--Detailed Analysis of Alternatives
- Task 11--FS Report
- Task 12--Proposed Plan
- Task 13--ROD Preparation
- Task 14--Administrative Record

Task 1--Project Planning

Premcor and their consultants shall: (1) develop the required project plans to meet the objectives of the RI/FS and (2) initiate subcontractor procurement and coordination with analytical laboratories. The project plans shall include a detailed work plan, a quality assurance project plan ("QAPP") (to include a field sampling plan ("FSP")); and a health and safety plan.

The work plan and corresponding activity plans shall be submitted by Premcor and reviewed and approved by Illinois EPA. Any revisions or additions to any of the project plans shall be submitted to Illinois EPA for review and approval.

A. Work Plan Preparation

Premcor shall review existing information (e.g., topographic maps, aerial photographs, data collected as part of any investigation) and conduct a Site visit to become familiar with Site topography, access routes, and the proximity of potential receptors to Site contaminants.

As part of project planning, Premcor and the Illinois EPA shall meet to discuss the proposed scope of the project and the specific investigative and analytical activities that shall be required, preliminary remedial action objectives and general response actions, potential remedial technologies and the need for or usefulness of treatability studies, potential Applicable or Relevant and Appropriate Requirements ("ARARs") associated with the location and contaminants of the Site and the potential response actions being contemplated, interim actions, sequencing of tasks to be completed, and whether a temporary Site office should be set up to support Site work.

Premcor and/or their contractor shall prepare a detailed work plan based on this SOW for the RI/FS. The work plan shall include a project description and an outline of the overall technical approach, complete with corresponding personnel requirements, activity schedules consistent with the SOW timeframes (eg., Document review times), deliverable due dates, and budget estimates for each of the specified tasks.

B. Quality Assurance Project Plan

Premcor shall prepare a QAPP to describe all sampling and analyses planned for the Site. The QAPP should address all types of investigations conducted and should include a project description, a project organization chart illustrating the lines of responsibility of the personnel involved in the sampling phase of the project, quality assurance objectives for data such as the required precision and accuracy, completeness of data, representativeness of data, comparability of data, and the intended use of collected data, sample custody procedures during sample collection, in the laboratory, and as part of the final evidence files, the type and frequency of calibration procedures for field and laboratory instruments, internal quality control checks, and quality assurance

performance audits and system audits, preventive maintenance procedures and schedule and corrective action procedures for field and laboratory instruments, specific procedures to assess data precision, representativeness, comparability, accuracy, and completeness of specific measurement parameters, and data documentation and tracking procedures. Standard operating procedures for Quality Assurance/Quality Control ("QA/QC") that has been established by EPA shall be referenced and not duplicated in the QAPP.

C. Field Sampling Plan

Premcor shall prepare a field sampling plan ("FSP") that includes an outline of all necessary activities to obtain additional Site data. It shall contain an evaluation explaining what additional data are required to adequately characterize the Site, conduct a baseline risk assessment, and support the evaluation of remedial technologies in the FS. The FSP should clearly state sampling objectives; necessary equipment; sample types, locations, and frequency; analyses of interest a/k/a "The Skinner List"; and a schedule stating when events shall take place and when deliverables shall be submitted. This document should be submitted as part of the QAPP.

D. Health and Safety Plan

Premcor shall develop a HSP on the basis of Site conditions to protect personnel involved in Site activities and the surrounding community. The plan shall address all applicable regulatory requirements contained in 20 CFR 1910.120(i)(2)--Occupational Health and Safety Administration, Hazardous Waste Operations and Emergency Response, Interim Rule, December 19, 1986; U.S. EPA Order 1440.2--Health and Safety Requirements for Employees Engaged in Field Activities; U.S. EPA Order 1440.3--Respiratory Protection; U.S. EPA Occupational Health and Safety Manual; and U.S. EPA Interim Standard Operating Procedures (September, 1982).

The plan shall provide a Site background discussion and describe personnel responsibilities, protective equipment, health and safety procedures and protocols, decontamination procedures, personnel training, and type and extent of medical surveillance. The plan shall identify problems or hazards that may be encountered and how these are to be addressed. Procedures for protecting third parties, such as visitors or the surrounding community, shall also be provided. Standard operating procedures for ensuring worker safety shall be referenced and not duplicated in the HSP.

The work plan and corresponding activity plans shall be submitted to Illinois EPA, for review and approval.

Task 2--Community Relations

The Illinois EPA shall be primarily responsible for community relations activities at this Site. The community relations program shall be integrated closely with all remedial response activities to ensure community understanding of actions being taken and to

obtain community input on the RI/FS progress.

The Illinois EPA shall prepare a Community Relations Plan ("CRP") on how citizens want to be involved in the process based on interviews with community representatives and leaders by state agency staff. The CRP shall describe the types of information to be provided to the public and outline the opportunities for community comment and input during the RI/FS. Deliverables, schedule and staffing shall be included in the plan.

Premcor shall provide appropriate assistance to the Illinois EPA in its development and implementation of the community relations program. Community relations activities for the Site shall include, but may not be limited to, the following:

- Establishment and maintenance of a community information repository(s), one of which shall house a copy of the administrative record.

- Preparation and dissemination of news releases, fact sheets, slide shows, exhibits, and other audio-visual materials designed to apprise the community of current or proposed activities.

- Development and upkeep of a mailing list that includes nearby and interested residents, public interest groups, and elected officials.

- Arrangements of briefings, press conferences, workshops, and public and other informal meetings.

- Analysis of community attitudes toward the proposed actions.

- Assessment of the successes and failures of the community relations program to date.

- Preparation of reports and participation in public meetings, project review meetings, and other meetings as necessary for the normal progress of the work.

Deliverables and the schedule for submittal shall be identified in the community relations plan. The Illinois EPA shall determine any revisions or additions to the CRP.

Task 3--Field Investigations

Premcor shall conduct those investigations necessary to characterize the Site and to evaluate the actual or potential risk to human health and the environment posed by the Site. Investigation activities shall focus on problem definition and result in data of adequate technical content to evaluate potential risks and to support the development and evaluation of remedial alternatives during the FS.

Strict chain-of-custody procedures shall be followed and all sample locations shall be identified on a Site map. Premcor shall provide management and QC review of all activities conducted under this task. Activities anticipated for this Site are as follows:

- Surveying and Mapping of the Site. Develop a map of the Site that includes topographic information and physical features on and near the Site. If no detailed topographic map for the Site and surrounding area exists, a survey of the Site shall be conducted. Aerial photographs should be used, when available, along with information gathered during the preliminary Site visit to identify physical features of the area.

- Waste Characterization. Determine the location, type, and quantities as well as the physical or chemical characteristics of any waste remaining at the Site. If hazardous substances are held in containment vessels, the integrity of the containment structure and the characteristics of the contents shall be determined.

- Hydrogeologic Investigation. Determine the presence and potential extent of ground water contamination. Efforts should begin with a survey of previous hydrogeologic studies and other existing data. The survey should address the soil's retention capacity/mechanisms, discharge/recharge areas, and regional flow directions and quality. Local/Site-specific hydrogeologic characteristics including depth to groundwater, hydraulic conductivity, local discharge/recharge areas, groundwater flow direction, and other pertinent aquifer characteristics should also be determined. The need for groundwater modeling to predict groundwater flow conditions should also be evaluated. Results from the sampling program should estimate the horizontal and vertical distribution of contaminants, the contaminants' mobility, and predict the long-term disposition of contaminants.

- Soils and Sediments Investigation. Determine the vertical and horizontal extent of contamination of surface and subsurface soils and sediments and identify any uncertainties with this analysis. Information on local background levels, degree of hazard, location of samples, techniques used, and methods of analysis should be included. If initial efforts indicate that buried waste may be present, the probable locations and quantities of these subsurface wastes should be identified through the use of appropriate geophysical methods.

- Surface Water Investigation. Estimate the extent and fate of any contamination in the nearby surface waters. This effort should include an evaluation of possible future discharges and the degree of contaminant dilution expected.

- Air Investigation. Investigate the extent of atmospheric contamination from those contaminants found to be present at the Site. This effort should assess the potential of the contaminants to enter the atmosphere, local wind patterns, and the anticipated fate of airborne contaminants.

Information from this task shall be summarized and included in the RI Report.

Task 4--Sample Analysis/Validation

Premcor shall utilize a data management system including field logs, sample management and tracking procedures, and document control and inventory procedures for both laboratory data and field measurements to ensure that the data collected during the investigation are of adequate quality and quantity to support the risk assessment and the FS. Collected data should be validated at the appropriate field or laboratory QAQC level III to determine whether it is appropriate for its intended use. Premcor and their consultants shall provide task management and quality controls. Premcor shall use a National Environmental Laboratory Accreditation Conference ("NELAC") Standards certified Lab Program for use as appropriate for analysis of field samples. Illinois EPA shall have primary responsibility for ensuring that validation of all data is performed in accordance with the approved QAPP for the Site. Premcor shall incorporate information from this task into the RI Report.

Task 5--Data Evaluation

Premcor shall analyze all Site investigation data and present the results of the analyses in an organized and logical manner so that the relationships between Site investigation results for each medium are apparent. Premcor and their consultants shall prepare a summary that describes (1) the quantities and concentrations of specific chemicals at the Site and the ambient levels surrounding the Site; (2) the number, locations, and types of nearby populations and activities and, (3) the potential transport mechanism and the expected fate of the contaminant in the environment. As part of this evaluation, a determination shall be made by Illinois EPA as to whether or not all necessary data has been obtained for the Site.

Task 6--Risk Assessment

A. Baseline Risk Assessment

Premcor and their consultants shall conduct a baseline risk assessment to assess the potential human health and environmental risks posed by the Site in the absence of any remedial action in accordance with guidance identified herein and databases. This effort shall involve four components:

- Contaminant Identification. Premcor and/or their contractor shall review available information on the hazardous substances present at the Site and identify the major contaminants of concern. Contaminants of concern should be selected based on their intrinsic toxicological properties because they are present in large quantities, and/or because they are currently in, or potentially may migrate into critical exposure pathways (e.g., drinking water).

- Exposure Assessment. Premcor and/or their contractor shall identify actual or potential exposure pathways, characterize potentially exposed populations, and evaluate the actual or potential extent of exposure.

- Toxicity Assessment. Premcor and/or their contractor shall provide a toxicity assessment of those chemicals found to be of concern during Site investigation activities. This shall involve an assessment of the types of adverse health or environmental effects associated with chemical exposures, the relationships between magnitude of exposures and adverse effects, and the related uncertainties for contaminant toxicity, (e.g., weight of evidence for a chemical's carcinogencity).

- Risk Characterization. Premcor and/or their contractor shall integrate information developed during the exposure and toxicity assessments to characterize the current or potential risk to human health and/or the environment posed by the Site. This characterization should identify the potential for adverse health or environmental effects for the chemicals of concern and identify any uncertainties associated with contaminant(s), toxicity, and/or exposure assumptions.

B. Ecological Risk Assessment

Premcor and/or their contractor shall conduct an ecological risk assessment to assess the potential environmental risks posed by the Site. This effort shall involve the following components:

- Site Characterization. Premcor and/or their contractor shall describe aquatic and terrestrial habitats and species potentially exposed to contaminants, summarize available information on the source, nature, and extent of Site contamination and potential routes of contaminant migration, and describe any known or suspected effects of Site contaminants to biota.

- Preliminary Screening. Premcor and/or their contractor shall use data from the Site characterization to determine whether Site contaminants pose a threat to ecologic receptors. This step should be used to determine the need for additional studies and to provide direction for those studies, if they are needed.

- Conduct Further Studies. If the Illinois EPA determines that additional studies are needed, Premcor and/or their contractor shall conduct such studies. Further studies shall be based on the particular ecological endpoints selected for the Site.

The risk assessment shall be submitted as part of the RI Report.

Task 7--Treatability Studies

A. Determination of Need For Treatability Studies

In consultation with Illinois EPA, Premcor and/or their contractor shall examine the need to conduct bench and/or pilot studies to determine the suitability of remedial technologies to Site conditions and problems. Technologies that may be suitable to the Site should be identified as early as possible to determine whether there is a need to conduct treatability studies to better estimate costs and performance capabilities. Should treatability studies be determined by Illinois EPA to be necessary, a separate work plan identifying the types and goals of the studies, the level of effort needed, a schedule for completion, and the data management guidelines should be submitted to the Illinois EPA for review and approval.

Task 8--RI Report

Premcor and/or their contractor shall present the results of Tasks 2 through 6 in a RI report. Support data, information, and calculations shall be included in appendices to the report. The Illinois EPA may submit a draft RI report to EPA for review. If comments on the draft RI report are received, the Illinois EPA shall ensure a revised RI report addressing the comments is prepared and may be submitted to EPA for final review.

Task 9--Remedial Alternatives Development and Screening

A. Development and Screening of Alternatives

Premcor and/or their contractor shall develop a range of distinct, hazardous waste management alternatives that shall remediate or control any contaminated media (soil, surface water, ground water, sediments) remaining at the Site, as deemed necessary in the RI, to provide adequate protection of human health and the environment. The potential alternatives shall encompass, as appropriate, a range of alternatives in which treatment is used to reduce the toxicity, mobility, or volume of wastes but vary in the degree to which long-term management of residuals or untreated waste is required, one or more alternatives involving containment with little or no treatment; and a no-action alternative. Alternatives that involve minimal efforts to reduce potential exposures (e.g., Site fencing, deed restrictions) should be presented as "limited action" alternatives.

The following steps shall be conducted to determine the appropriate range of alternatives for this Site:

- Establish Remedial Action Objectives and General Response Actions.

  Based on existing information, Site-specific remedial action objectives to protect human health and the environment should be developed. The objectives shall specify the contaminant(s) and media of concern, the exposure route(s) and

receptor(s), and an acceptable contaminant level or range of levels for each exposure route (i.e., preliminary remediation goals).

Preliminary remediation goals should be established based on readily available information (e.g., Rfds) or chemical-specific ARARs (e.g., MCLs). Premcor and/or their contractor shall meet with the Illinois EPA to discuss the remedial action objectives for the Site. As more information is collected during the RI, Premcor and/or their contractor, in consultation with Illinois EPA, shall refine remedial action objectives as appropriate.

General response actions shall be developed for each medium of interest defining contaminant, treatment, excavation, pumping, or other actions, singly or in combination to satisfy remedial action objectives. Volumes or areas of media to which general response actions may apply shall be identified, taking into account requirements for protectiveness as identified in the remedial action objectives and the chemical and physical characteristics of the Site.

- Identify and Screen Technologies.

Based on the developed general response actions, hazardous waste treatment technologies shall be identified and screened to ensure that only those technologies applicable to the contaminants present, their physical matrix, and other Site characteristics shall be considered. This screening shall be based primarily on a technology's ability to effectively address the contaminants at the Site, but shall also take into account a technology's implementability and cost.

Premcor and/or their contractor shall select representative process options, as appropriate, to carry forward into alternative development. The Illinois EPA shall identify the need for treatability testing (as described under Task 7) for those technologies that are probable candidates for consideration during the detailed analysis.

- Configure and Screen Alternatives.

The potential technologies and process options shall be combined into media-specific or Site-wide alternatives. The developed alternatives shall be defined with respect to size and configuration of the representative process options; time for remediation; rates of flow or treatment; spatial requirements; distances for disposal; and required permits, imposed limitations, and other factors necessary to evaluate the alternatives.

If many distinct, viable, options are available and developed, a screening of alternatives shall be conducted to limit the number of alternatives that undergo the detailed analysis and to provide consideration of the most promising process options. The alternatives shall be screened on a general basis with respect to their effectiveness, implementability, and cost. Premcor and/or their contractor shall meet

with Illinois EPA to discuss which alternatives shall be evaluated in the detailed analysis and to facilitate the identification of Applicable or Relevant and Appropriate Requirements.

B. Alternatives Array Document

Premcor and/or their contractor shall prepare an alternatives array document based on the results of this meeting. The Illinois EPA may submit the alternative array document to EPA for review and identification of Federal ARARs. Upon receipt of Federal ARARs, the Illinois EPA may meet with EPA to finalize ARARs and alternatives for detailed analysis for the Site.

Task 10--Detailed Analysis of Alternatives

Upon receipt of the ARAR determination information, Premcor and/or their contractor shall conduct a detailed analysis of alternatives that shall consist of an individual analysis of each alternative against a set of evaluation criteria and a comparative analysis of all options against the evaluation criteria with respect to one another.

The evaluation criteria are as follows:

Overall Protection of Human Health and the Environment:
Addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

Compliance with ARARs:
Addresses whether or not a remedy shall meet all of the applicable or relevant and appropriate requirements of other Federal and State environmental statutes and/or provide grounds for invoking a waiver.

Long-Term Effectiveness and Permanence:
Refers to the ability or a remedy to maintain reliable protection of human health and the environment over time once cleanup goals have been met.

Reduction of Toxicity, Mobility, or Volume Through Treatment:
Is the anticipated performance of the treatment technologies a remedy may employ.

Short-Term Effectiveness:
Addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.

Implementability:
Is the technical and administrative feasibility of a remedy, including the availability of

materials and services needed to implement a particular remedial option.

Cost:
Includes estimated capital and operation and maintenance costs, and net present worth costs.

Support Agency Acceptance:
Addresses the technical or administrative issues and concerns the support agency may have regarding each alternative.

Community Acceptance:
Addresses the issues and concerns the public may have to each of the alternatives.

The individual analysis shall include: (1) a technical description of each alternative that outlines the waste management strategy involved and identifies the key ARARs associated with each alternative; and (2) a discussion that profiles the performance of that alternative with respect to each of the evaluation criteria. A table summarizing the results of this analysis shall be prepared. Once the individual analysis is complete, the alternatives shall be compared and contrasted to one another with respect to each of the nine evaluation criteria.

Task 11--FS Report

The contractor shall present the results of Tasks 8, 9 and 10 in a FS report. Support data, information, and calculations shall be included in appendices to the report. The Illinois EPA may submit a draft FS report to EPA for review. If comments on the draft FS have been received, the Illinois EPA shall ensure a revised FS report addressing the comments is prepared and may be submitted to EPA for final review.

Task 12--Proposed Plan

The Illinois EPA shall develop a proposed plan for the Site based on the results of the FS report. The proposed plan shall include the Illinois EPA 's preferred alternative and shall be prepared in accordance with current EPA guidance. The preferred alternative shall be protective of human health and the environment, shall attain ARARs identified for the Site or provide the basis for invoking a waiver, shall be cost effective, and shall utilize treatment technologies and permanent solutions to the maximum extent practicable.

The Illinois EPA may submit a draft proposed plan to EPA for review prior to issuing the document for public comment and may present a briefing on the proposed plan to EPA's management. Upon receipt of EPA's comments on the draft plan, if any, the Illinois EPA shall incorporate the comments into the plan and may provide EPA with the revised proposed plan for final review and approval. If necessary, the Illinois EPA shall meet with EPA to discuss the preferred alternative.

Upon issuance of the proposed plan for public comment, the Illinois EPA shall publish a newspaper notice announcing the availability of the RI/FS and proposed plan in the public repository. The Illinois EPA shall hold a public meeting on the proposed plan and solicit comments from the public. The entire public meeting shall be recorded by a court reporter.

Task 13--Record of Decision Preparation

Following receipt of public comments on the proposed plan, the Illinois EPA shall prepare a draft Record of Decision ("ROD") which shall include the responsiveness summary and the index for the administrative record for the Site. The ROD shall be prepared in accordance with current EPA guidance. The Illinois EPA may submit the draft ROD to EPA and other appropriate parties for review and comment. The Illinois EPA shall incorporate comments, if any, and may submit the final ROD for signature to EPA. Once the ROD is finalized, the Illinois EPA shall publish a newspaper notice of the availability of the final ROD and shall make the ROD available to the public and provide a copy of the final ROD to the Site repository.

Task 14--Administrative Record

During the RI/FS phase, the Illinois EPA shall establish a Site Administrative Record ("AR") for the selection of the response actions. The AR is a subset of the Site file that contains all the documents that were considered or relied upon in the selection of remedy for response actions, and acts as a vehicle for public participation. The Illinois EPA shall be responsible for establishing the Site AR and ensuring that all documents, whether they support or oppose the selected action, forming the basis for the selection of the response action are available to the public at or near the Site prior to the commencement of the public comment period, at a minimum.

The Illinois EPA shall be responsible for proper compilation and maintenance of the AR file. Judicial review of issues concerning the adequacy of any response action is limited to the information contained in the AR. The Illinois EPA shall compile and maintain the AR in accordance with the Final Guidance on Administrative Records for Selecting CERCLA Response Actions (December 1990). The Illinois EPA may submit a draft AR index to EPA for review and comments.

STATEMENT OF WORK
FOR
Site Investigation of the
Potentially Unimpacted Areas: 1, 2, 6 and 7
The Premcor Refining Group
Clark Blue Island Facility

I. PURPOSE

The purpose of this Site Investigation (SI) is to investigate the nature and extent of contamination at the Premcor, Clark Blue Island Facility Site, (Areas 1, 2, 6 and 7) and to perform additional investigative studies as required, such as remedial investigation/feasibility study (RI/FS). Premcor shall furnish all necessary personnel, materials, and services needed for, or incidental to, performing the investigation, except as otherwise specified herein. Premcor and their consultants shall conduct the investigation in accordance with the Guidance for Performing Preliminary Assessments Under CERCLA (U.S. EPA, September 1991) and the Guidance for Performing Site Inspections Under CERCLA (U.S. EPA, September 1992), and the guidance referenced therein, as may be amended or modified by EPA.

II. SCOPE

The specific SI activities to be conducted at the Premcor, Clark Blue Island Facility Site, Areas 1, 2, 6, & 7 are segregated into 7 separate tasks.

- Task 1--Project Planning
- Task 2--Community Relations
- Task 3--Field Investigations
- Task 4--Sample Analysis/Validation
- Task 5--Data Evaluation
- Task 6--SI Report
- Task 7--Administrative Record

Task 1--Project Planning

Premcor and their consultants shall: (1) develop the required project plans to meet the objectives of the SI and (2) initiate subcontractor procurement and coordination with analytical laboratories. The project plans shall include a detailed work plan, a quality assurance project plan ("QAPP") (to include a field sampling plan ("FSP")); and a health and safety plan.

The work plan and corresponding activity plans shall be submitted by Premcor for review and approval by Illinois EPA. Any revisions or additions to any of the project plans shall

be submitted to Illinois EPA for review and approval.

A. Work Plan Preparation

Premcor shall review existing information (e.g., topographic maps, aerial photographs, data collected as part of any investigation) and conduct a Site visit to become familiar with Site topography, access routes, and the proximity of potential receptors to Site contaminants.

As part of project planning, Premcor and the Illinois EPA shall meet to discuss the proposed scope of the project and the specific investigative and analytical activities that shall be required, potential Applicable or Relevant and Appropriate Requirements ("ARARs") associated with the location and contaminants of the Site and the sequencing of tasks to be completed, and whether a temporary Site office should be set up to support Site work.

Premcor and/or their contractor shall prepare a detailed work plan based on this SOW for the SI. The work plan shall include a project description and an outline of the overall technical approach, complete with corresponding personnel requirements, activity schedules consistent with the SOW timeframes (eg., Document review times), deliverable due dates, and budget estimates for each of the specified tasks.

B. Quality Assurance Project Plan

Premcor shall prepare a QAPP to describe all sampling and analyses planned for the Site. The QAPP should address all types of investigations conducted and should include a project description, a project organization chart illustrating the lines of responsibility of the personnel involved in the sampling phase of the project, quality assurance objectives for data such as the required precision and accuracy, completeness of data, representativeness of data, comparability of data, and the intended use of collected data, sample custody procedures during sample collection, in the laboratory, and as part of the final evidence files, the type and frequency of calibration procedures for field and laboratory instruments, internal quality control checks, and quality assurance performance audits and system audits, preventive maintenance procedures and schedule and corrective action procedures for field and laboratory instruments, specific procedures to assess data precision, representativeness, comparability, accuracy, and completeness of specific measurement parameters, and data documentation and tracking procedures. Standard operating procedures for Quality Assurance/Quality Control ("QA/QC") that has been established by EPA shall be referenced and not duplicated in the QAPP.

C. Field Sampling Plan

Premcor shall prepare a field sampling plan ("FSP") that includes an outline of all necessary activities to obtain additional Site data. It shall contain an evaluation explaining what additional data are required to adequately characterize the Site, and

support the evaluation of remedial technologies. The FSP should clearly state sampling objectives; necessary equipment; sample types, locations, and frequency; analyses of interest; and a schedule stating when events shall take place and when deliverables shall be submitted. This document should be submitted as part of the QAPP.

D. Health and Safety Plan

Premcor shall develop a HSP on the basis of Site conditions to protect personnel involved in Site activities and the surrounding community. The plan shall address all applicable regulatory requirements contained in 20 CFR 1910.120(i)(2)--Occupational Health and Safety Administration, Hazardous Waste Operations and Emergency Response, Interim Rule, December 19, 1986; U.S. EPA Order 1440.2--Health and Safety Requirements for Employees Engaged in Field Activities; U.S. EPA Order 1440.3--Respiratory Protection; U.S. EPA Occupational Health and Safety Manual; and U.S. EPA Interim Standard Operating Procedures (September, 1982).

The plan shall provide a Site background discussion and describe personnel responsibilities, protective equipment, health and safety procedures and protocols, decontamination procedures, personnel training, and type and extent of medical surveillance. The plan shall identify problems or hazards that may be encountered and how these are to be addressed. Procedures for protecting third parties, such as visitors or the surrounding community, shall also be provided. Standard operating procedures for ensuring worker safety shall be referenced and not duplicated in the HSP.

The work plan and corresponding activity plans shall be submitted to Illinois EPA, for review and approval.

Task 2--Community Relations

The Illinois EPA shall be primarily responsible for community relations activities at this Site. The community relations program shall be integrated closely with all remedial response activities to ensure community understanding of actions being taken and to obtain community input on the RI/FS progress as well as progress on this SI on the potentially unimpacted areas.

The Illinois EPA shall prepare a Community Relations Plan ("CRP") on how citizens want to be involved in the process based on interviews with community representatives and leaders by state agency staff. The CRP shall describe the types of information to be provided to the public and outline the opportunities for community comment and input during the RI/FS. Deliverables, schedule, staffing, and budget requirements shall be included in the plan.

Premcor shall provide appropriate assistance to the Illinois EPA in its development and implementation of the community relations program. Community relations activities for the Site shall include, but may not be limited to, the following:

- Establishment and maintenance of a community information repository(s), one of which shall house a copy of the administrative record.

- Preparation and dissemination of news releases, fact sheets, slide shows, exhibits, and other audio-visual materials designed to apprise the community of current or proposed activities.

- Development and upkeep of a mailing list that includes nearby and interested residents, public interest groups, and elected officials.

- Arrangements of briefings, press conferences, workshops, and public and other informal meetings.

- Analysis of community attitudes toward the proposed actions.

- Assessment of the successes and failures of the community relations program to date.

- Preparation of reports and participation in public meetings, project review meetings, and other meetings as necessary for the normal progress of the work.

Deliverables and the schedule for submittal shall be identified in the community relations plan. The Illinois EPA shall determine any revisions or additions to the CRP.

Task 3--Field Investigations

Premcor shall conduct investigations necessary to characterize the Site and to evaluate the actual or potential risk to human health and the environment posed by the Site. Investigation activities shall focus on problem definition and result in data of adequate technical content to evaluate the need for further RI/FS activities.

Strict chain-of-custody procedures shall be followed and all sample locations shall be identified on a Site map. Premcor shall provide management and QC review of all activities conducted under this task. Activities anticipated for this Site are as follows:

- Surveying and Mapping of the Site. Develop a map of the Site that includes topographic information and physical features on and near the Site. If no detailed topographic map for the Site and surrounding area exists, a survey of the Site shall be conducted. Aerial photographs should be used, when available, along with information gathered during the preliminary Site visit to identify physical features of the area.

- Waste Characterization. Determine the location, type, and quantities as well as the physical or chemical characteristics of any waste remaining at the Site. If hazardous substances are held in containment vessels, the integrity of the

containment structure and the characteristics of the contents shall be determined.

- Hydrogeologic Investigation. Determine the presence and potential extent of ground water contamination. Efforts should begin with a survey of previous hydrogeologic studies and other existing data. The survey should address the soil's retention capacity/mechanisms, discharge/recharge areas, and regional flow directions and quality. Local/Site-specific hydrogeologic characteristics including depth to groundwater, hydraulic conductivity, local discharge/recharge areas, groundwater flow direction, and other pertinent aquifer characteristics should also be determined. The need for groundwater modeling to predict groundwater flow conditions should also be evaluated. Results from the sampling program should estimate the horizontal and vertical distribution of contaminants, the contaminants' mobility, and predict the long-term disposition of contaminants.

- Soils and Sediments Investigation. Determine the vertical and horizontal extent of contamination of surface and subsurface soils and sediments and identify any uncertainties with this analysis. Information on local background levels, degree of hazard, location of samples, techniques used, and methods of analysis should be included. If initial efforts indicate that buried waste may be present, the probable locations and quantities of these subsurface wastes should be identified through the use of appropriate geophysical methods.

- Surface Water Investigation. Estimate the extent and fate of any contamination in the nearby surface waters. This effort should include an evaluation of possible future discharges and the degree of contaminant dilution expected.

- Air Investigation. Investigate the extent of atmospheric contamination from those contaminants found to be present at the Site. This effort should assess the potential of the contaminants to enter the atmosphere, local wind patterns, and the anticipated fate of airborne contaminants.

Information from this task shall be summarized and included in the SI Report for the Potentially Unimpacted Areas.

Task 4--Sample Analysis/Validation

Premcor shall develop a data management system including field logs, sample management and tracking procedures, and document control and inventory procedures for both laboratory data and field measurements to ensure that the data collected during the investigation are of adequate quality and quantity to support a decision of further studies via an RI/FS or a no further action decision. Collected data should be validated at the appropriate field or laboratory QAQC III level to determine whether it is appropriate for its intended use. Premcor and their consultants shall provide task management and quality controls. Premcor shall use an Illinois National Environmental Laboratory Accreditation Conference ("NELAC") Standards certified Lab Program for use as

appropriate for analysis of field samples. Illinois EPA shall have primary responsibility for ensuring that validation of all data is performed in accordance with the approved QAPP for the Site. Premcor shall incorporate information from this task into the SI Report.

Task 5--Data Evaluation

Premcor shall analyze all SI data and present the results of the analyses in an organized and logical manner so that the relationships between Site investigation results for each medium are apparent. Premcor and their consultants shall prepare a summary that describes (1) the quantities and concentrations of specific chemicals at the Site and the ambient levels surrounding the Site; (2) the number, locations, and types of nearby populations and activities and, (3) the potential transport mechanism and the expected fate of the contaminant in the environment. As part of this evaluation, a determination by Illinois EPA shall be made as to whether or not all necessary data has been obtained for the Site.

Task 6--SI Report

Premcor and/or their contractor shall present the results of Tasks 2 through 5 in a Site Investigation Report for Areas 1, 2, 6, and 7. Support data, information, and calculations shall be included in appendices to the report. The Illinois EPA may submit a draft to EPA for their review.

Task 7--Administrative Record

This task is included in this SOW due to the ongoing RI/FS at the facility and any information gained by the SI activities at the Site may be included in the AR. During the RI/FS phase, the Illinois EPA shall establish a Site Administrative Record ("AR") for the selection of the response actions. The AR is a subset of the Site file that contains all the documents that were considered or relied upon in the selection of remedy for response actions, and acts as a vehicle for public participation. The Illinois EPA shall be responsible for establishing the Site AR and ensuring that all documents, whether they support or oppose the selected action, forming the basis for the selection of the response action are available to the public at or near the Site prior to the commencement of the public comment period, at a minimum.

The Illinois EPA shall be responsible for proper compilation and maintenance of the AR file. Judicial review of issues concerning the adequacy of any response action is limited to the information contained in the AR. The Illinois EPA shall compile and maintain the AR in accordance with the Final Guidance on Administrative Records for Selecting CERCLA Response Actions (December 1990). The Illinois EPA may submit a draft AR index to EPA for review and comments.

August 11, 2010

Premcor

Premier People,
Products and Services

Premcor Alsip Distribution Center
3600 West 131st Street
Alsip, Illinois 60803-1535

Nicole M. Wilson, P.E.
Environmental Protection Engineer
Illinois EPA
MC #24
1021 North Grand Avenue East
P.O. Box 19276
Springfield, Illinois 62794-9276

Re: The Premcor Refining Group Inc.
Blue Island, IL Site
Case No. 04CH01571 – Consent Order
Monthly Progress Report – July 2010
Remedial Investigation/Feasibility Study (RI/FS) Areas

Dear Ms. Wilson:

Pursuant to section IX, paragraph 24 of the Consent Order, The Premcor Refining Group Inc. (Premcor) is submitting 2 hard copies and 2 CD copies of the July 2010 monthly progress report for the Remedial Investigation/Feasibility Study (RI/FS) areas at the Premcor Blue Island Site. Per the June 26, 2007 IEPA approval of the movement of Areas 1, 2 and 6 into the RI/FS program and the May 6, 2009 IEPA approval of the movement of Area 7 into the RI/FS program, the RI/FS areas include all areas of the site— the Northwest Property (Area 1), the West Property (Area 2), the Northwest Terminal (Area 3), Southwest Terminal (Area 4, which includes the 19-acre Metropolitan Water Reclamation District (MWRD) parcel), the Triangle Area (Area 5, also known as the former refinery area), the Administration Offices area (Area 6), and the Parco Foods Property (Area 7, also known as the Cookie Factory).

If you have any questions regarding this submittal or need additional information, please feel free to contact me at (708) 385-9513.

Sincerely,

Thomas F. Mroz, Jr.
Environmental Manager
The Premcor Refining Group Inc.

Cc: Mr. Howard Chinn – Chief Engineer IAGO
Mr. Patrick Dunne – URS Corporation (via e-mail)
Mr. Adam Falkauff – Liberty International Underwriters (via e-mail)

URS

Monthly Report
Remedial Investigation/Feasibility Study Areas
Period: July 2010

The Premcor Refining Group Inc.
Blue Island Facility
Blue Island, IL

Prepared for:

The Premcor Refining Group Inc.

Prepared by:

URS Corporation

August 2010

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1.0 Introduction

On March 16, 2004, The Premcor Refining Group Inc. (Premcor) and the State of Illinois entered into the Consent Order for Remedial Investigation/Feasibility Study (RI/FS) and Site Investigation (SI) at the Premcor Blue Island Facility. The Consent Order requires Premcor to provide separate monthly progress reports for the RI/FS areas and SI areas on the 15th of each month. The monthly reports are to be submitted to the Illinois Environmental Protection Agency (IEPA) and the Illinois Attorney General (IAG).

This monthly report documents RI/FS activities conducted during this reporting period (July 2010) and provides a chronological summary of RI/FS activities completed to date.

Per the June 26, 2007 IEPA approval of the movement of Areas 1, 2 and 6 into the RI/FS program and the May 6, 2009 IEPA approval of the movement of Area 7 into the RI/FS program, the RI/FS areas include all areas of the site the Northwest Property (Area 1), the West Property (Area 2), the Northwest Terminal (Area 3), Southwest Terminal (Area 4, which includes the 19-acre Metropolitan Water Reclamation District (MWRD) parcel), the Triangle Area (Area 5, also known as the former refinery area), the Administration Offices area (Area 6), and the Parco Foods Property (Area 7, also known as the Cookie Factory).

The first Monthly Report, for March 2004 activities, was submitted to the IEPA and IAG on April 14, 2004. Given that the Consent Order was executed in mid-March 2004 and no field activities were completed from March through July 2004, Premcor submitted one report for the respective monthly activities. Since URS Corporation (URS) began RI/FS field activities in August 2004, Premcor has submitted two separate reports to document RI/FS and SI activities. Subsequent monthly reports were submitted by the 15th of each month. The next Monthly Report for August 2010 RI/FS activities will be submitted to the IEPA and IAG by September 15, 2010.

This monthly report documenting RI/FS activities includes the following:

Activities Completed during the Reporting Period (July 2010) are provided in Section 2.0. The Section provides:

- A description of the actions that have been taken to comply with the Consent Order during the reporting month; and
- All results of sampling and tests and all other data (soil borings, field sampling, chains of custody) received by Premcor.

Future Plans (August and September 2010) are provided in Section 3.0. The Section provides:

- A description of work planned for the next two months with schedules relating such work to the overall project schedule for RI/FS and Site Investigation completion; and
- A description of all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

2.0 *Activities Completed in July 2010*

Consent Order Required Deliverables

In accordance with the Consent Order requirements, Premcor prepared and submitted the monthly report for June 2010 activities to the IEPA and IAG. The monthly report was received by the IEPA and IAG by the Consent Order due date.

On July 14, 2010, the IEPA approved URS and Premcor's *Request for Reduced Groundwater Level Monitoring Frequency*, submitted June 17, 2010. The approval reduced groundwater level collection frequency from quarterly to annually.

On July 12, 2010, URS held a conference call with the IEPA's consultant, TetraTech EMI to discuss the response to IEPA comments on the ecological risk assessment portion of the *RI Report.*

Field Activities

The Consent Order was executed in mid-March 2004, and the IEPA approved the six project plans in July 2004. Premcor forwarded the July 21, 2004 letter providing 14-day notification for field work activities. URS began field investigation activities in August 2004 in the Southwest Terminal (Area 4). Field activities for the geoprobe investigation were completed in December 2004.

During February and March 2005, URS installed, developed, and sampled the monitoring wells and piezometers in the Southwest Terminal (Area 4) and Northwest Terminal (Area 3). In April 2005, URS conducted hydraulic conductivity tests on the monitoring wells and piezometers.

In November 2005, URS completed the free-phase hydrocarbon delineation activities in the Northwest and Southwest Terminals (Areas 3 and 4, respectively), as well as sediment and surface water sampling in Wireton and Stony Creeks. Temporary wells in the Triangle Area (Area 5) were installed and sampled in December 2005 and January 2006.

In February 2006, sediment and surface water samples were collected from the Cal Sag Channel.

On March 7, 2006, URS collected water level measurements from the facility monitoring wells.

On April 4, 2006, URS collected water level measurements from the facility monitoring wells. On April 5, 2006, the third quarterly groundwater sampling event commenced. Sampling was completed on April 14, 2005.

On May 2, 2006, URS collected water level measurements from the facility monitoring wells. On May 22, 2006, URS commenced field activities to install and sample the wells proposed in the April Technical Memorandum, in addition to the proposed Triangle Area (Area 5) monitoring wells and site-wide bedrock wells, as approved by the IEPA.

On June 2, 2006, URS collected water level measurements from the facility monitoring wells, including the wells installed in May 2006. URS continued to install the wells proposed in the April Technical Memorandum in June 2006.

On July 5, 2006, URS collected water level measurements from the facility monitoring wells, including the wells installed in June 2006. URS continued to install the wells proposed in the April Technical Memorandum during July 2006. On July 6, 2006, the fourth quarterly groundwater sampling event commenced. Sampling continued through July 19, 2006.

On August 2, 2006, URS collected water level measurements from the facility monitoring wells, including newly installed and developed wells. URS continued to install the wells proposed in the April Technical Memorandum and the Bedrock Rationale during August 2006.

On September 6, 2006, URS collected water level measurements from the facility monitoring wells, including newly installed and developed wells. URS continued to install the wells proposed in the April Technical Memorandum and the Bedrock Rationale during September 2006. Bedrock well installation was completed September 25, 2006.

On October 9, 2006, URS collected water level measurements from the facility monitoring wells, including newly installed and developed wells. On October 10, 2006 the fifth quarterly groundwater sampling event commenced. The approved wells in Areas 1, 2, 3 and 4 were sampled, along with additional approved locations in the Triangle Area (Area 5). Sampling was completed on October 24, 2006.

On November 9-10, 2006, URS collected water level measurements from the facility monitoring wells, including newly installed and developed wells. Also during November, slug testing was performed on wells installed in the previous field mobilization.

On December 5, 2006, URS collected water level measurements from the facility monitoring wells. Slug testing of wells installed during the tech memo mobilization occurred in December 2006.

On January 9, 2007, URS collected water level measurements from the facility monitoring wells. On January 10, the sixth quarterly groundwater sampling event commenced and included the first round of quarterly sampling for select bedrock wells. Sampling was completed on February 2, 2007.

On February 6, 2007, URS collected water level measurements from the facility monitoring wells. The January 2007 quarterly sampling event concluded on February 2, 2007.

On March 6-7, 2007, URS collected water level measurements from the facility monitoring wells.

On April 3, 2007, URS collected water level measurements from the facility monitoring wells. On April 4, 2007 the seventh quarterly groundwater sampling event commenced. Select wells in the Northwest Property (Area 1) and the West Property (Area 2) were sampled and included in the Northwest Terminal (Area 3) sampling plan. The first quarterly sampling of the IEPA-approved bedrock locations also occurred in April 2007.

On May 7, 2007, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells; per the request for groundwater level measurement reduction submitted to the IEPA and approved March 9, 2007.

On June 6, 2007, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells.

On July 5 and 6, 2007, URS collected monthly water level measurements from the facility monitoring wells. On July 9, the eighth quarterly groundwater sampling event commenced. After IEPA approval, URS implemented the interim sampling program, reducing the number of wells sampled to the list approved by the IEPA.

On August 1, 2007, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells. On August 28, 2007, the bedrock step-out activities commenced. Bedrock step-outs and permanent bedrock wells were proposed for the Northwest Property (Area 1), West Property (Area 2), Northwest Terminal (Area 3), and Southwest Terminal (Area 4). The bedrock step-out investigation also includes areas requiring off-site access by Premcor.

On September 10, 2007, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells. Bedrock step-out activities continued through the month of September.

On October 4 and 5, 2007, URS collected monthly water level measurements from the facility monitoring wells. On October 8, the ninth quarterly groundwater sampling event commenced. Quarterly groundwater sampling activities were completed October 31, 2007.

Proposed product delineation activities in the Triangle Area (Area 5) and Southwest Terminal (Area 4) commenced October 17, 2007. On October 26, 2007, damaged temporary wells SWTF-33W and SWTF-34W in the Southwest Terminal (Area 4) were abandoned and new temporary

wells were installed (SWTF-33WR and SWTF-34WR). On October 31, 2007, the proposed temporary wells on the NuStar (formerly Valero LP) property were installed.

On November 13, 2007, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells. The SWTF (Southwest Terminal (Area 4)) and NWTF (Northwest Terminal (Area 3)) wells installed in October 2007 were developed in November 2007.

On December 12, 2007, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells.

On January 7, 2008, URS collected water level measurements from the facility monitoring wells. On January 8, 2008 the tenth quarterly groundwater sampling event commenced. Sampling was completed on January 28, 2008.

On February 5, 2008, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells.

On March 4, 2008, URS collected monthly water level measurements from the Triangle Area (Area 5) wells and the site-wide bedrock wells.

On April 8, 2008, URS collected quarterly water level measurements from the facility monitoring wells. On April 9, 2008 the eleventh quarterly groundwater sampling event commenced. Sampling was completed on May 9, 2008.

In May 2008, monthly water level measurements were discontinued due the monitoring frequency being reduced to quarterly in accordance with the IEPA verbal approval on February 8, 2008 of the *Request for Reduced Groundwater Level Monitoring Frequency for Triangle Area and Bedrock Wells* letter submitted on January 18, 2008. On May 28, 2008, URS and Premcor met with Commonwealth Edison (ComEd) and its environmental subcontractor to discuss the proposed ComEd-lead remediation of a transformer release (certified non-PCB containing

mineral oil) located in the Administration Offices Area (Area 6). The spill occurred some time in December of 2007 as a result of vandalism of the transformer. ComEd reported the estimated 6,800-gallon release to the Illinois Office of Emergency Response. The proposed area of remedial excavation is approximately 160' long by 75' to 90' wide by 4' deep. Site temporary monitoring well TA-47W is located within the anticipated remediation area and will be properly abandoned prior to the start of remedial activities. Proposed remediation and well abandonment activities were discussed with the Premcor IEPA RPM in a May 29, 2008, IEPA conference call. IEPA approval to abandon temporary monitoring well TA-47W was received on June 6, 2008. The first phase (excavation and backfilling of the planned excavation) of the ComEd transformer release remediation in the Administration Offices Area (Area 6) was initiated on June 11, 2008 and completed on June 26, 2008.

On May 23, 2008, Premcor submitted a follow-up letter to the Illinois Emergency Management Agency (IEMA) and the IEPA detailing clean-up efforts following an environmental incident (#20080545) releasing approximately 20 gallons of unleaded gasoline occurring on April 23, 2008, at the Vapor Recovery Unit in the Northwest Terminal Facility (Area 3). Remediation measures have been completed and any further response activities will be conducted as part of the ongoing site remediation program.

On June 27, 2008, Premcor and URS met with the IEPA to finalize and submit the Revised Risk Assessment Memoranda Nos. 1, 2, and 3.

On July 8, 2008, URS collected quarterly water level measurements from the facility monitoring wells. On July 9, 2008 the twelfth quarterly groundwater sampling event commenced. Sampling was completed on July 25, 2008.

No field work was conducted in August 2008.

No field work was conducted in September 2008.

No field work was conducted in October 2008.

No field work was conducted in November 2008.

No field work was conducted in December 2008.

On January 20-21, 2009, URS collected sitewide quarterly groundwater levels

On February 24, 2009, separate phase liquid samples were collected from well TA-17RW and AO-7W for determination of physical parameters.

Between March 23, 2009 and May 4, 2009, Weaver Boos Consultants, the consultant for Blue Island Phenol LLC (BIP), sampled soils, groundwater, sediment, and surface water at the Northwest Property (Area 1) in response to an August 24, 2008 fire and chemical release at the BIP facility. Water discharged during fire suppression activities at the facility flowed onto the Premcor Northwest Property and discharged into Wireton Creek. The objective of the BIP investigation was to establish the potential nature and extent of BIP chemicals on the Northwest Property as a result of the chemical release. URS personnel documented investigation activities on the Northwest Property.

On April 21-22, 2009, URS collected site-wide quarterly groundwater levels. On April 22, 2009, the semi-annual sampling event, as proposed in the IEPA-approved *Site-Wide Interim Groundwater Monitoring Program, Revision 01*, commenced. Sampling of 39 wells was completed on April 29, 2009.

No field work was conducted in May 2009.

After securing final access agreements with three adjacent off-site property owners to the west and south of the WDA and NWTF, bedrock step-out boring and groundwater sampling activities were initiated on June 22, 2009 and completed on July 8, 2009. The objective of the bedrock investigation was to establish the extent of benzene in groundwater in two off-site areas where benzene exceedances had not been fully delineated. Fourteen step-out borings were advanced

into the shallow bedrock as part of the investigation. One conventional two-inch monitoring well was proposed (WDA-21BR), and an additional well was constructed at one of the 14 boring locations (WDA-27BR). A groundwater grab sample was collected from the bedrock at each boring location and submitted for chemical analysis of benzene, ethylbenzene, toluene, and xylene (BETX).

On July 22-23, 2009, URS collected site-wide quarterly groundwater levels.

No field work was conducted in August 2009.

No field work was conducted in September 2009.

On October 5, 2009, URS collected site-wide quarterly groundwater levels. The semi-annual groundwater sampling event was initiated on October 7, 2009, and completed on October 20, 2009 Sixty-four ground water monitoring well locations were sampled as part of the field event.

On November 16, 2009, URS installed the proposed additional bedrock wells on the TEPPCO property. Representatives from URS conducted a wetlands determination for the WDA and NWDA from November 18-20, 2009. A representative from TTEMI was present for the wetlands determination.

No field work was conducted in December 2009.

On January 12-13, 2010, URS collected site-wide quarterly groundwater levels.

No field work was conducted in February 2010.

No field work was conducted in March 2010.

On April 6-7, 2010, URS collected site-wide quarterly groundwater levels. The semi-annual groundwater sampling event was initiated on April 7, 2010 and completed on April 15, 2010. Forty-one groundwater monitoring well locations were sampled as part of the field event.

On May 13, 2010, the well abandonment activities proposed in *Monitoring Well Integrity Inspection – Rationale for the Abandonment of Damaged Monitoring Wells* commenced. Well abandonment activities are ongoing.

As discussed in the *Site-Wide Interim Groundwater Monitoring Program, Revision* 01, the validated data for the April semi-annual event are presented in this report. Forty-one wells were sampled between April 7 and 15, 2010. Analytical results were compared to both the TACO Tier 1 Class I groundwater remediation objective (GRO) and the risk-based screening levels established in the Remedial Investigation Report, submitted April 14, 2010. Analyte concentrations were typically within the range of historical values seen at all sampling locations; no substantial increases in concentration were observed. A decrease in the benzene concentration at TA-32W occurred in October 2009 sampling results, and the well was removed from the sampling program, per the approved *Site-Wide Interim Groundwater Monitoring Program.*

No field work was conducted in June 2010.

3.0 Future Plans

Activities planned for August and September 2010 include:

- Submission of the response to IEPA technical review comments for the *Remedial Investigation Report*, submitted April 14, 2010.
- Follow-up communications with the IEPA to discuss IEPA comments on the draft RI report.

Premcor and URS will conduct conference calls as needed with the IEPA and TetraTech EMI to discuss task specific details and schedules. The next conference call is currently not scheduled.

Anticipated Problems or Delays

No anticipated problems or delays have been identified at this time.

CONSENT ORDER SUBMITTAL REGISTER

9/8/2010

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9/15/2004 **EFFECTIVE DATE OF CONSENT ORDER**

SUBMITTAL REFERENCE CO – CONSENT ORDER; SOW = STATEMENT OF WORK; Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										SUBMITTAL PREPARATION & DUE DATE												REVIEWER ACTION		REMARKS
		DATA	DRAWINGS	PLANS	RD SCHEDULES	RD RESPONDENCE	REPORTS	CERTIFICATES	SAMPLED	RECORDS	QA MANUALS	SUBMITTAL DURATION REQUIRED BY CONSENT ORDER (# of days)	REVIEW DRAFT TO PREMCOR AND LIBERTY		PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PREMCOR & LIBERTY		FINAL APPROVAL NEEDED BY PREMCOR & LIBERTY		TO IEPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE REQUIRED BY CONSENT ORDER	CODE	DATE	
													TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED OR LRS RECEIVED				
a	b	c	d	e	f	g	h	i	j	k	l	m	d	o	p	q	r	s	t	u	v	w	x	y	z	aa	
	Letter Status Report to the Court						X					183	3/25/2004	5/10/2004	9/29/2004		9/5/2004	9/13/2004	9/10/2004	9/13/2004	9/12/2004	9/14/2004	9/15/2004	9/15/2004			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	2/29/2005	3/17/2005	3/27/2005		9/8/2005		9/13/2005		9/13/2005	9/19/2005	9/15/2005	9/15/2005			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	9/8/2005	9/7/2005	9/7/2005	9/8/2005	9/8/2005	9/13/2005	9/9/2005	9/14/2005	9/13/2005	9/14/2005	9/15/2006	9/15/2006			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	3/8/2006	3/2/2006	3/9/2006	3/8/2006	3/8/2006	3/8/2006	3/8/2006	3/8/2006	3/13/2006	3/13/2006	3/14/2006	3/15/2006			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	9/8/2006	9/6/2006	9/7/2006	9/8/2006	9/8/2006	9/6/2006	9/9/2006	9/6/2006	9/13/2006	9/8/2006	9/7/2006	9/15/2006			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	3/8/2007	3/2/2007	3/9/2007	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/8/2007	3/13/2007	3/12/2007	3/15/2007	3/15/2007			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	9/6/2007	9/4/2007	9/7/2007	9/6/2007	9/8/2007	9/5/2007	9/9/2007	9/8/2007	9/12/2007	9/7/2007		9/15/2007			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	9/5/2008	9/18/2008	9/8/2008	9/10/2008	9/8/2008	9/5/2008	9/8/2008	9/5/2008	9/13/2008	9/12/2008	9/15/2008	9/15/2008			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	9/5/2008	8/8/2008	9/8/2008	8/27/2008	9/8/2008	8/27/2008	9/10/2008	8/27/2008	9/13/2008	9/12/2008	9/15/2008	9/15/2008			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	3/5/2009	2/20/2009	3/6/2009	2/23/2009	3/9/2009		3/10/2009		3/14/2009			3/15/2009			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	9/7/2009	9/1/2009	9/8/2009		9/10/2009		9/11/2009		9/14/2009			9/15/2009			The status report was a joint effort between Premcor and the IAG office.
	Letter Status Report to the Court						X					183	3/7/2010	3/3/2010	9/8/2009		9/10/2009		9/11/2009		9/14/2009			3/15/2010			The status report was a joint effort between Premcor and the IAG office.
	CO, SECTION III.3																									
CO, p 7	Provide Copy of Consent Order									X		31	9/24/2004		9/25/2004		9/23/2004		9/30/2004		4/1/2004	3/29/2004	3/30/2004	4/6/2004			To contractors, subcontractors, labs, and consultants
	CO, SECTION V.6																									Names, titles, qualifications of personnel, including
CO, p 10	Notify IEPA of Contractor Selection					X						14	3/30/2004		9/21/2004		3/23/2004		9/24/2004		3/25/2004	3/29/2004	3/30/2004	3/30/2004			contractors, subs, consultants, and labs
CO, p 10	Submit Copy of Proposed Contractors Quality Management Plan (QMP)						X					14	3/30/2004		9/21/2004		3/23/2004		9/24/2004		3/25/2004	3/29/2004	3/30/2004	3/30/2004			
	CO, SECTION V.7.a																									
CO, p 13	RI/FS Work Plan			X								60	4/12/2004	5/6/2004	4/19/2004	5/10/2004	4/29/2004	5/12/2004	5/4/2004	5/12/2004	5/10/2004	5/14/2004	5/14/2004	5/15/2004			
CO, p 13	RI/FS Field Sampling Plan			X								60	4/12/2004	5/6/2004	4/19/2004	5/10/2004	4/29/2004	5/12/2004	5/4/2004	5/12/2004	5/10/2004	5/14/2004	5/14/2004	5/15/2004			
CO, p 13	QAPP for the RI/FS			X								60	4/12/2004	5/6/2004	4/19/2004	5/7/2004	4/29/2004	5/12/2004	5/4/2004	5/12/2004	5/10/2004	5/14/2004	5/14/2004	5/15/2004			QAPP combined for RI/FS and SI
CO, p 14	Health and Safety Plan for the RI/FS			X								60	4/12/2004	4/30/2004	4/19/2004	5/7/2004	4/29/2004	5/12/2004	5/4/2004	5/12/2004	5/10/2004	5/14/2004	5/14/2004	5/15/2004			Combined HASP with SI
	IEPA Comments on the Project Plans					X						30											6/15/2004	6/15/2004			
CO, p 13	Revised RI/FS Work Plan			X								45	6/28/2004	7/2/2004	6/29/2004	7/9/2004	6/30/2004	7/8/2004	7/1/2004	7/8/2004	7/2/2004	7/8/2004	7/9/2004	7/15/2004			
CO, p 13	Revised RI/FS Field Sampling Plan			X								45	6/28/2004	7/2/2004	6/29/2004	7/9/2004	6/30/2004	7/8/2004	7/1/2004	7/8/2004	7/2/2004	7/8/2004	7/9/2004	7/15/2004			
CO, p 13	Revised QAPP for the RI/FS			X								45	6/28/2004	7/2/2004	6/29/2004	7/8/2004	6/30/2004	7/9/2004	7/1/2004	7/8/2004	7/2/2004	7/7/2004	7/9/2004	7/15/2004			QAPP combined for RI/FS and SI
CO, p 14	Revised Health and Safety Plan for the RI/FS			X								45	6/18/2004	6/22/2004	6/21/2004	6/23/2004	6/22/2004	6/23/2004	6/23/2004	6/23/2004	6/24/2004	7/7/2004	7/9/2004	7/15/2004			Combined HASP with SI
	IEPA Approval of the QAPP and HASP					X						30											7/14/2004	8/3/2004			July 14, 2004 IEPA letter
	IEPA Comments for the RI/FS Field Sampling Plan and Work Plan					X						30											7/14/2004	8/3/2004			July 14, 2004 IEPA letter
CO, p 13	Revised RI/FS Work Plan (2nd revision)			X								45	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/21/2004	7/22/2004	7/23/2004	8/28/2004			
CO, p 13	Revised RI/FS Field Sampling Plan (2nd revision)			X								45	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/19/2004	7/21/2004	7/22/2004	7/23/2004	8/28/2004			
	IEPA Approval of the RI/FS Field Sampling Plan and Work Plan					X						60											7/22/2004	10/21/2004			July 22, 2004 IEPA letter
CO, p 16	Remedial Investigation Report	X	X				X					No deadline specified in the CO. Pursuant to the revised schedule in the work plan (September 3, 2009)									4/14/2010	4/14/2010	4/15/2010			
CO, p 17	Memorandum on Remedial Action Objectives						X					45															45 days from receipt of approval of the RI from IEPA
CO, p 17	Memorandum on Development and Preliminary Screening of Alternatives						X					45															45 days after submittal of Memorandum on Remedial Action Objectives
CO, p 18	Feasibility Study Report						X					No deadline specified in the CO. Pursuant to the approved schedule in the work plan															
	CO, SECTION V.7.b																									
CO, p 19	Site Investigation Work Plan for Areas 1,2,8,7			X								60	4/12/2004	5/6/2004	4/19/2004	5/7/2004	4/29/2004	5/12/2004	5/4/2004	5/12/2004	5/10/2004	5/14/2004	5/14/2004	5/15/2004			

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a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	
CO, p 20	Field Sampling Plan for Areas 1,2,6,7			X								60	4/19/2004	5/8/2004	4/19/2004	5/7/2004	4/29/2004	5/13/2004	5/14/2004	5/14/2004	5/19/2004	5/14/2004		5/14/2004	5/15/2004			
CO, p 20	QAPP for Areas 1,2,6,7			X								60	4/19/2004	5/8/2004	4/19/2004	5/7/2004	4/29/2004	5/13/2004	5/14/2004	5/12/2003	5/19/2004	5/14/2004		5/14/2004	5/15/2004			QAPP combined for RI/FS and SI
CO, p 20	Health and Safety Plan for the SI for Areas 1,2,6,7			X								60	4/19/2004	4/30/2004	4/19/2004	5/07/2004	4/29/2004	5/12/2004	5/14/2004	5/12/2004	5/19/2004	5/14/2004		5/14/2004	5/15/2004			Combined with HASP for RI/FS
	IEPA Comments on the Project Plans					X						90												6/12/2004	6/12/2004			
CO, p 20	Revised SI Work Plan			X								45	6/28/2004	7/2/2004	6/29/2004	7/6/2004	6/30/2004	7/6/2004	7/1/2004	7/6/2004	7/9/2004	7/6/2004		7/6/2004	7/26/2004			
CO, p 20	Revised SI Field Sampling Plan			X								45	6/28/2004	7/2/2004	6/29/2004	7/6/2004	6/30/2004	7/6/2004	7/1/2004	7/6/2004	7/9/2004	7/6/2004		7/6/2004	7/26/2004			
CO, p 20	Revised QAPP for the SI			X								45	6/28/2004	7/2/2004	6/29/2004	7/6/2004	6/30/2004	7/6/2004	7/1/2004	7/6/2004	7/9/2004	7/7/2004		7/6/2004	7/26/2004			QAPP combined for RI/FS and SI
CO, p 20	Revised Health and Safety Plan for the SI			X								45	6/18/2004	6/30/2004	6/21/2004	6/29/2004	6/22/2004	6/29/2004	6/23/2004	6/29/2004	6/24/2004	7/7/2004		7/6/2004	7/25/2004			Combined HASP with RI/FS
	IEPA Approval of the QAPP, HASP, and SI FSP and WP											90												7/14/2004	6/30/2004			July 14, 2004 IEPA letter
CO, p 22	Site Investigation Report						X																					No deadline specified in the CO. Pursuant to the approved schedule in the work plan
	CO, SECTION VI.16																											
CO, p 28	Documents developed during the course of the RI/FS upon which selection of the response action may be based	x																										
	Hollow Stem Auger Rationale - Southwest Terminal (Area 4)	x	x				x																1/18/2005				Revision submitted on January 28, 2005 approved by IEPA
	Hollow Stem Auger Rationale - Northeast Terminal (Area 3)	x	x				x																2/15/2005				Revision submitted on March 14, 2005 approved by IEPA
	QAPP Addendum 01 (Pesticide Decision Tree)	x		x			x																7/15/2005				Approved by IEPA September 2, 2005
	QAPP Addendum 02 (Dioxins Addendum)	x		x			x																6/6/2005				Revision submitted on March 24, 2006 approved by IEPA
	RI/FS FSP Addendum 01 (Free Phase Hydrocarbon Delineation Plan)	x		x			x																8/8/2005				Revision submitted on October 26, 2005 approved by IEPA
	RI/FS FSP Addendum 02 (Qtrly Monitoring for Areas 3 and 4)	x		x			x																6/6/2005				Revision submitted on August 11, 2006 approved by IEPA
	Evaluation of Selenium in Site Soils						x																7/18/2005				Summary report - No approval necessary
	SI Activities - Diesel spill at Tanks 77 and 78						x																7/18/2005				Summary report - No approval necessary
	RI/FS FSP Addendum 03 (Sampling Prioritization)						x																1/30/2006				Approved by IEPA April 5, 2006
	Quarterly Groundwater Sampling Report for October 2005 Event																						1/29/2006				Revision submitted on September 29, 2006 approved by IEPA
	RI/FS FSP Addendum 04 (NWTF-62W Rationale)	x	x																				8/14/2006				Revision submitted on August 25, 2006
	RPH Activities Summary Report	x	x				x																5/29/2006				
	Bedrock Rationale (All Areas)	x	x																				3/15/2006				Revision submitted May 11, 2006 approved by IEPA
	Dioxin Data Summary Evaluation	x	x																				8/16/2006				Revision submitted September 21, 2006
	Quarterly Groundwater Sampling Report for January 2006 Event	x	x																				11/17/2006				Submitted to IEPA November 17, 2006
	RI/FS FSP Addendum 05 - Quarterly Groundwater Monitoring Plan for Bedrock Wells	x	x																				12/5/2006				Submitted to IEPA December 4, 2006
	Quarterly Groundwater Sampling Report for April 2006 Event	x	x																				12/29/2006				Submitted to IEPA December 28, 2007
	Quarterly Groundwater Sampling Report for July 2006 Event	x	x																				1/29/2007				Submitted to IEPA January 23, 2007
	RI/FS FSP Addendum 07 - Bedrock Step-Out Rationale	x	x																				1/19/2007				Submitted to IEPA January 19, 2007
	Letter to Request Quarterly GW Level Collection					x																	2/7/2007				Submitted to IEPA February 7, 2007. IEPA approval received March 9, 2007.
	Submission of Revised Schedule				x																		2/27/2007				Submitted to IEPA February 27, 2007.
	Quarterly Groundwater Sampling Report for October 2006 Event	x	x																				3/9/2007				Submitted to IEPA March 9, 2007
	Risk Assessment Technical Memorandum No. 01					x																	3/28/2007				Submitted to IEPA March 28, 2007
	Risk Assessment Technical Memorandum No. 02					x																	4/7/2006				Submitted to IEPA April 6, 2007
	Risk Assessment Technical Memorandum No. 03					x																	4/14/2006				Submitted to IEPA April 13, 2007
	Response to IEPA Comments on RI/FS FSP Add 07 - Bedrock Stepout Rationale																						5/10/2007				Submitted to IEPA May 10, 2007
	Quarterly Groundwater Monitoring Report, January 2007 Sampling Event	x	x				x																5/18/2007				Submitted to IEPA May 18, 2007
	Interim Groundwater Monitoring Plan for NWTF and SWTF	x	x				x																6/19/2007				Submitted to IEPA June 19, 2007
	Response to IEPA Comments on IEPA Technical Review Comments for Quarterly Groundwater Monitoring Report, January 2007 Sampling Event																						7/14/2007				Submitted to IEPA July 13, 2007
	Quarterly Groundwater Monitoring Report, April 2007 Sampling Event	x	x				x																9/7/2007				Submitted to IEPA September 7, 2007

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		DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORT	CERTIFICATES	SAMPLES	RECORDS	MANUALS	SUBMITTAL DEVIATION REQUIRED BY CONSENT DECREE (if any)	REVIEW DRAFT TO PREMCOR AND LIBERTY		PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PREMCOR & LIBERTY		FINAL APPROVAL NEEDED BY PREMCOR & LIBERTY		TO IEPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE REQUIRED BY CONSENT ORDER	CODE	DATE	
													TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED OR UPS RECEIVED				
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	
	Response to IEPA comments on Risk Assessment Technical Memorada 1, 2 and 3 (updated memos submitted as well)						X																12/18/2007				Submitted to IEPA December 18, 2007
	Quarterly Groundwater Monitoring Report, July 2007 Sampling Event	X	X				X																1/3/2008				Submitted to IEPA January 3, 2008
	Letter to Request Quarterly GW Level Collection for Triangle Area and Bedrock Wells					X																	1/18/2008				Submitted to IEPA January 18, 2008. IEPA verbal approval received February 8, 2008.
	Proposed Interim Monitoring Program - Triangle (Area 5) Wells and Sitewide Bedrock Wells	X	X				X															3/20/2008	3/21/2008				Submitted to IEPA March 20, 2008
	Quarterly Groundwater Monitoring Report, October 2007 Sampling Event	X	X				X															3/21/2008	3/24/2008				Submitted to IEPA March 21, 2008
	Submission of Revised Schedule				X																		3/18/2008				Submitted to IEPA March 18, 2008.
	RI/FS FSP Addendum No. 08 - Additional Bedrock Step-out Rationale	X	X				X									5/13/2008				5/13/2008	5/15/2008	5/14/2008	5/15/2008				Submitted to IEPA May 15, 2008
	Quarterly Groundwater Monitoring Report, January 2008 Sampling Event	X	X				X									5/13/2008				5/13/2008	5/15/2008	5/14/2008	5/15/2008				Submitted to IEPA May 15, 2008
	Revised Risk Assessment Technical Memorada 1, 2 and 3						X															6/27/2008	6/27/2008				Submitted to IEPA June 27, 2008 - Hand Delivered during Site meeting
	Response to IEPA comments on Revised Risk Assessment Technical Memorada 1, 2, and 3						X															8/8/2008	8/7/2008				Submitted to IEPA August 8, 2008
	Response to IEPA technical comments on *RI/FS FSP Addedum No. 08 - Additional Bedrock Step-Out Rationale*						X															8/7/2008	8/8/2008				Submitted to the IEPA August 7, 2008
	Quarterly Groundwater Monitoring Report - April 2008 Sampling Event						X															8/19/2008	8/20/2008				Submitted to IEPA August 19, 2008
	Proposal to abandon wells damaged during ComEd excavation and backfill activities																					8/20/2008	8/21/2008				Submitted to IEPA August 20, 2008
	Sitewide Interim Monitoring Program	X		X																			11/19/2008				Submitted to IEPA November 19, 2008
	Quarterly Groundwater Monitoring Report - July 2008 Sampling Event	X	X																				1/29/2009				Submitted to IEPA January 29, 2009
	Response to IEPA Technical Review Comments on Site-Wide Interim Monitoring Program	X	X				X																3/16/2009				Submitted to IEPA March 13, 2009.
	Quarterly Groundwater Monitoring Report - October 2008 Sampling Event																					5/11/2009					Submitted to IEPA May 11, 2009.
	Letter Requesting RI Report Modification (Modified Table of Contents submitted)																					5/14/2009					Hard copy and electronic copies submitted to IEPA and IAG on May 14, 2009.
	Updated *Health and Safety Plan*																					8/28/2009	9/1/2009				Hard copy and electronic copies submitted to IEPA and IAG on August 28, 2009.
	QAPP Addendum No. 09																					8/28/2009	9/1/2009				Hard copy and electronic copies submitted to IEPA and IAG on August 28, 2009.
	Technical Memorandum No. 4 (Risk Assessment)																					8/31/2009	9/1/2009				Hard copy and electronic copies submitted to IEPA and IAG on August 31, 2009.
	Technical Memorandum No. 5 (Risk Assessment)																					8/31/2009	9/2/2009				Hard copy and electronic copies submitted to IEPA and IAG on August 31, 2009.
	Technical Memorandum No. 6 (Additional Bedrock Step-Out Summary)																					8/31/2009	9/2/2009				Hard copy and electronic copies submitted to IEPA and IAG on August 31, 2009.
	Updated Project Schedule																					9/3/2009	9/5/2009				Hard copy and electronic copies submitted to IEPA and IAG on September 3, 2009.
	Monitoring Well Inspection - Rationale for the Abandonment of Damaged Monitoring Wells																					10/12/2009	10/14/2009				Hard copy and electronic copies submitted to IEPA and IAG on October 12, 2009.
	Technical Memorandum No. 7 - Hydraulic Conductivity (Slug Testing) Results																					10/19/2009	10/27/2009				Hard copy and electronic copies sent out October 23, 2009.
	Technical Memorandum No. 8 – Physical Soil Properties for Site Characterization																					10/19/2009	10/27/2009				Hard copy and electronic copies sent out October 23, 2009.
	Addendum A to Technical Memorandum No. 6 - November 2009 Bedrock Step-Out Activities Summary																					2/2/2010	2/3/2010				Hard copies sent to IEPA/IAG on February 3, 2010.
	Technical Memorandum No. 4 - SERA Conceptual Site Model (Rev. 01)																					2/4/2010	2/5/2010				Hard copies sent to IEPA/IAG on February 4, 2010.
	Technical Memorandum No. 10 - Routine Wetlands Delineation Survey																					2/4/2010	2/5/2010				Hard copies sent to IEPA/IAG on February 4, 2010 with Technical Memorandum No. 4.
	Technical Memorandum No. 5 - Contaminants of Potential Ecological Concern (COPECs) (Rev. 01)																					2/8/2010	2/9/2010				Hard copies sent to IEPA/IAG on February 8, 2010.
	Technical Memorandum No. 9 - Updated Area Water Well Survey																					3/15/2010	3/16/2010				Hard copies sent to IEPA/IAG on March 15, 2010.
	Addendum 1 to the RI Report																					4/30/2010	5/1/2010				Hard copies sent to IEPA/IAG on April 30, 2010.
	Letter Request for Reduced Groundwater Level Monitoring Frequency																					6/17/2010	6/17/2010				Hard copies sent to IEPA/IAG on June 17, 2010. Approved by IEPA on July 147, 2010.
	Final Draft Response to RI Report Comments																					8/20/2010	8/20/2010				Electronic copies sent to IEPA on August 20, 2010

CONSENT ORDER SUBMITTAL REGISTER

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5/8/2004	EFFECTIVE DATE OF CONSENT ORDER

SUBMITTAL REFERENCE CO = CONSENT ORDER SOW = STATEMENT OF WORK Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										SUBMITTAL PREPARATION & DUE DATE												REVIEWER ACTION		REMARKS
		DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORTS	CERTIFICATIONS	SAMPLE PLEDGE	RECORDS	O&M MANUALS	SUBMITTAL DURATION (assigned by consent order)	REVIEW DRAFT TO PREMCOR AND LIBERTY		PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PREMCOR & LIBERTY		FINAL APPROVAL ISSUED BY PREMCOR & LIBERTY		TO IEPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE ASSIGNED BY CONSENT ORDER	CODE	DATE	
													TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED OR URS RECEIVED				
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	
CO, p 28	Documents developed during the SI process																										
	Additional Activities Summary Report - Northwest Property (Area 1)	x	x																				9/30/2005				Revision submitted on May 12, 2006 approved by IEPA
	Hollow Stem Auger Rationale - Parco Foods (Area 7)	x	x																				5/5/2005				Revision submitted on June 6, 2005 approved by IEPA
	Hollow Stem Auger Rationale - Administrative Offices (Area 6)	x	x																				6/6/2005				Revision submitted on July 25, 2006 approved by IEPA
	Additional Investigation Activities Summary - West Property	x	x																				1/8/2006				Revision submitted June 30, 2006 approved by IEPA
	Letter Requesting Movement of Areas 1, 2 and 6 from SI to RI/FS					x																	5/3/2007				Hard copy sent to IEPA and IAG on May 3, 2007
	SI Work Plan Addendum 01 - Parco Foods Property (Area 7) Interim Remedial Action Plan (IRAP)		x			x																	7/25/2007				Hard copy sent to IEPA and IAG on July 25, 2007
	Response To IEPA Comments of Proposed Installation of Temporary Wells at Parco Foods Property					x																	2/21/2008				Hard copy sent to IEPA and IAG on February 20, 2008
	Parco IRAP Activities Summary Report	x	x																				10/24/2008				Hard copy sent to IEPA and IAG on October 24, 2008
	Response to IEPA Technical Review Comments on *IRAP Activities Summary Report - Parco Foods Property*	x	x																				2/27/2009				Hard copy sent to IEPA and IAG on February 27, 2009
	Request to move Parco Foods Property to RI/FS Program					x																	3/2/2009				Hard copy sent to IEPA and IAG on March 2, 2009. IEPA approval received May 6, 2009.
CO, p 29	Any previous studies and communications relating to selection of the response action					x																					
	CO, SECTION IX.24																										
CO, p 31	Monthly Progress Reports for the RI/FS						x						4/5/2004	4/12/2004	4/7/2004	4/13/2004	4/8/2004	4/15/2004	4/9/2004	4/19/2004	4/10/2004	4/14/2004	4/15/2004	4/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the SI						x						4/5/2004	4/12/2004	4/7/2004	4/13/2004	4/8/2004	4/15/2004	4/9/2004	4/19/2004	4/10/2004	4/14/2004	4/15/2004	4/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the RI/FS						x						5/5/2004	5/10/2004	5/7/2004	5/12/2004	5/8/2004	5/13/2004	5/9/2004	5/19/2004	5/10/2004	5/13/2004	5/14/2004	5/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the SI						x						5/5/2004	5/10/2004	5/7/2004	5/12/2004	5/8/2004	5/13/2004	5/9/2004	5/19/2004	5/10/2004	5/13/2004	5/14/2004	5/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the RI/FS						x						6/4/2004	6/10/2004	6/7/2004	6/11/2004	6/8/2004	6/11/2004	6/9/2004	6/11/2004	6/10/2004	6/14/2004	6/15/2004	6/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the SI						x						6/4/2004	6/10/2004	6/7/2004	6/11/2004	6/8/2004	6/11/2004	6/9/2004	6/11/2004	6/10/2004	6/14/2004	6/15/2004	6/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the RI/FS						x						7/7/2004	7/12/2004	7/8/2004	7/13/2004	7/9/2004	7/13/2004	7/12/2004	7/12/2004	7/12/2004	7/12/2004	7/14/2004	7/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the SI						x						7/7/2004	7/12/2004	7/8/2004	7/13/2004	7/9/2004	7/13/2004	7/12/2004	7/12/2004	7/12/2004	7/12/2004	7/14/2004	7/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the RI/FS						x						8/9/2004	8/10/2004	8/10/2004	8/10/2004	8/11/2004	8/10/2004	8/12/2004	8/10/2004	8/13/2004	8/11/2004	8/13/2004	8/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the SI						x						8/9/2004	8/10/2004	8/10/2004	8/10/2004	8/11/2004	8/10/2004	8/12/2004	8/10/2004	8/13/2004	8/11/2004	8/13/2004	8/15/2004			RI/FS and SI submitted in combined monthly report
CO, p 31	Monthly Progress Reports for the RI/FS						x						8/9/2004	9/10/2004	9/10/2004	9/15/2004	9/11/2004	9/13/2004	9/12/2004	9/13/2004	9/13/2004	9/14/2004	9/15/2004	9/15/2004			RI/FS monthly report for August 2004
CO, p 31	Monthly Progress Reports for the SI						x						8/9/2004	9/13/2004	9/10/2004	9/15/2004	9/11/2004	9/13/2004	9/12/2004	9/13/2004	9/13/2004	9/14/2004	9/15/2004	9/15/2004			SI monthly report for August 2004
CO, p 31	Monthly Progress Reports for the RI/FS						x						10/8/2004	10/12/2004	10/11/2004	10/18/2004	10/11/2004	10/13/2004	10/12/2004	10/18/2004	10/13/2004	10/14/2004	10/15/2004	10/15/2004			RI/FS monthly report for September 2004
CO, p 31	Monthly Progress Reports for the SI						x						10/8/2004	10/12/2004	10/11/2004	10/12/2004	10/11/2004	10/13/2004	10/12/2004	10/13/2004	10/13/2004	10/14/2004	10/15/2004	10/15/2004			SI monthly report for September 2004
CO, p 31	Monthly Progress Reports for the RI/FS						x						11/8/2004	11/10/2004	11/10/2004	11/10/2004	11/11/2004	11/10/2004	11/12/2004	11/11/2004	11/12/2004	11/12/2004	11/15/2004	11/15/2004			RI/FS monthly report for October 2004
CO, p 31	Monthly Progress Reports for the SI						x						11/8/2004	11/10/2004	11/10/2004	11/10/2004	11/11/2004	11/12/2004	11/12/2004	11/11/2004	11/12/2004	11/12/2004	11/15/2004	11/15/2004			SI monthly report for October 2004
CO, p 31	Monthly Progress Reports for the RI/FS						x						12/7/2004	12/9/2004	12/9/2004	12/15/2004	12/9/2004	12/10/2004	12/10/2004	12/16/2004	12/13/2004	12/14/2004	12/15/2004	12/15/2004			RI/FS monthly report for November 2004
CO, p 31	Monthly Progress Reports for the SI						x						12/7/2004	12/9/2004	12/9/2004	12/10/2004	12/9/2004	12/10/2004	12/10/2004	12/10/2004	12/13/2004	12/14/2004	12/15/2004	12/15/2004			SI monthly report for November 2004
CO, p 31	Monthly Progress Reports for the RI/FS						x						1/7/2005	1/7/2005	1/10/2005	1/10/2005	1/11/2005	1/11/2005	1/12/2005	1/11/2005	1/13/2005	1/12/2005	1/15/2005	1/15/2005			RI/FS monthly report for December 2004
CO, p 31	Monthly Progress Reports for the SI						x						1/7/2005	1/7/2005	1/10/2005	1/10/2005	1/11/2005	1/11/2005	1/12/2005	1/11/2005	1/13/2005	1/12/2005	1/15/2005	1/15/2005			SI monthly report for December 2004
CO, p 31	Monthly Progress Reports for the RI/FS						x						2/8/2005	2/11/2005	2/10/2005	2/11/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/15/2005	2/15/2005			RI/FS monthly report for January 2005
CO, p 31	Monthly Progress Reports for the SI						x						2/8/2005	2/11/2005	2/10/2005	2/15/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/16/2005	2/15/2005			SI monthly report for January 2005
CO, p 31	Monthly Progress Reports for the RI/FS						x						3/8/2005	3/11/2005	3/10/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/15/2005	3/15/2005			RI/FS monthly report for February 2005
CO, p 31	Monthly Progress Reports for the SI						x						3/8/2005	3/8/2005	3/10/2005	3/15/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/15/2005	3/15/2005			SI monthly report for February 2005
CO, p 31	Monthly Progress Reports for the RI/FS						x						4/8/2005	4/11/2005	4/12/2005	4/15/2005	4/14/2005	4/19/2005	4/14/2005	4/13/2005	4/14/2005	4/14/2005	4/15/2005	4/15/2005			RI/FS monthly report for March 2005
CO, p 31	Monthly Progress Reports for the SI						x						4/8/2005	4/11/2005	4/12/2005	4/15/2005	4/14/2005	4/13/2005	4/14/2005	4/13/2005	4/14/2005	4/14/2005	4/15/2005	4/15/2005			SI monthly report for March 2005
CO, p 31	Monthly Progress Reports for the RI/FS						x						5/7/2005	5/9/2005	5/10/2005	5/9/2005	5/9/2005	5/9/2005	5/10/2005	5/9/2005	5/19/2005	5/11/2005	5/12/2005	5/15/2005			RI/FS monthly report for April 2005
CO, p 31	Monthly Progress Reports for the SI						x						5/7/2005	5/9/2005	5/10/2005	5/9/2005	5/9/2005	5/9/2005	5/10/2005	5/9/2005	5/19/2005	5/11/2005	5/12/2005	5/15/2005			SI monthly report for April 2005

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SUBMITTAL REFERENCE CO = CONSENT ORDER; SOW = STATEMENT OF WORK; Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL											SUBMITTAL PREPARATION & DUE DATE													REVIEWER ACTION		REMARKS
		DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORTS	CERTIFICATES	DAMPED	RECORDS	O&M MANUALS		SUBMITTAL DURATION REQUIRED BY CONSENT ORDER (# of days)	REVIEW DRAFT TO PRINCOR AND LIBERTY		PRINCOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PRINCOR & LIBERTY		FINAL APPROVAL NEEDED BY PRINCOR & LIBERTY		TO IEPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE REQUIRED BY CONSENT ORDER	REVIEWER ACTION		
														TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED OR LRS RECEIVED		CODE	DATE	
A	B	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa		
CO, p 31	Monthly Progress Reports for the RI/FS						X							6/5/2005	6/6/2005	6/9/2005	6/9/2005	6/9/2005	6/9/2005	6/10/2005	6/9/2005	6/13/2005	6/14/2005	6/15/2005	6/15/2005			RI/FS monthly report for May 2005
CO, p 31	Monthly Progress Reports for the SI						X							6/5/2005	6/6/2005	6/9/2005	6/9/2005	6/9/2005	6/9/2005	6/10/2005	6/9/2005	6/13/2005	6/14/2005	6/15/2005	6/15/2005			SI monthly report for May 2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							7/5/2005	7/5/2005	7/7/2005	7/5/2005	7/6/2005	7/6/2005	7/7/2005	7/6/2005	7/13/2005	7/11/2005	7/15/2005	7/15/2005			RI/FS monthly report for June 2005
CO, p 31	Monthly Progress Reports for the SI						X							7/5/2005	7/6/2005	7/7/2005	7/6/2005	7/6/2005	7/5/2005	7/7/2005	7/6/2005	7/13/2005	7/11/2005	7/15/2005	7/15/2005			SI monthly report for June 2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							8/5/2005	8/5/2005	8/8/2005	8/8/2005	8/5/2005	8/5/2005	8/8/2005	8/8/2005	8/12/2005	8/11/2005	8/15/2005	8/15/2005			RI/FS monthly report for July 2005
CO, p 31	Monthly Progress Reports for the SI						X							8/5/2005	8/5/2005	8/8/2005	8/8/2005	8/5/2005	8/5/2005	8/8/2005	8/8/2005	8/12/2005	8/11/2005	8/15/2005	8/15/2005			SI monthly report for July 2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							9/6/2005	9/7/2005	9/7/2005	9/7/2005	9/6/2005	9/6/2005	9/8/2005	9/8/2005	9/12/2005	9/13/2005	9/15/2005	9/15/2005			RI/FS monthly report for August 2005
CO, p 31	Monthly Progress Reports for the SI						X							9/6/2005	9/7/2005	9/7/2005	9/7/2005	9/6/2005	9/6/2005	9/8/2005	9/8/2005	9/12/2005	9/13/2005	9/15/2005	9/15/2005			SI monthly report for August 2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							10/6/2005	10/7/2005	10/10/2005	10/10/2005	10/6/2005	10/10/2005	10/6/2005	10/10/2005	10/12/2005	10/13/2005	10/14/2005	10/15/2005			RI/FS monthly report for September 2005
CO, p 31	Monthly Progress Reports for the SI						X							10/6/2005	10/7/2005	10/10/2005	10/10/2005	10/6/2005	10/6/2005	10/6/2005	10/10/2005	10/12/2005	10/13/2005	10/14/2005	10/15/2005			SI monthly report for September 2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							11/7/2005	11/4/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/11/2005	11/11/2005	11/14/2005	11/15/2005			RI/FS monthly report for October 2005
CO, p 31	Monthly Progress Reports for the SI						X							11/7/2005	11/4/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/11/2005	11/11/2005	11/14/2005	11/15/2005			SI monthly report for October2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							12/5/2005	12/6/2005	12/7/2005	12/6/2005	12/6/2005	12/6/2005	12/9/2005	12/9/2005	12/13/2005	12/13/2005	12/14/2005	12/15/2005			RI/FS monthly report for November 2005
CO, p 31	Monthly Progress Reports for the SI						X							12/5/2005	12/6/2005	12/7/2005	12/6/2005	12/6/2005	12/6/2005	12/9/2005	12/9/2005	12/13/2005	12/13/2005	12/14/2005	12/15/2005			SI monthly report for November 2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							1/5/2006	1/9/2006	1/7/2006	1/10/2006	1/6/2006	1/10/2006	1/9/2006	1/10/2006	1/13/2006	1/12/2006	1/13/2006	1/15/2006			RI/FS monthly report for December 2005
CO, p 31	Monthly Progress Reports for the SI						X							1/5/2006	1/9/2006	1/7/2006	1/10/2006	1/6/2006	1/10/2006	1/9/2006	1/10/2006	1/13/2006	1/12/2006	1/13/2006	1/15/2006			SI monthly report for December 2005
CO, p 31	Monthly Progress Reports for the RI/FS						X							2/9/2006	2/9/2006	2/10/2006	2/9/2006	2/10/2006	2/9/2006	2/13/2006	2/10/2006	2/13/2006	2/13/2006	2/14/2006	2/15/2006			RI/FS monthly report for January 2006
CO, p 31	Monthly Progress Reports for the SI						X							2/9/2006	2/9/2006	2/10/2006	2/9/2006	2/10/2006	2/9/2006	2/13/2006	2/10/2006	2/13/2006	2/13/2006	2/14/2006	2/15/2006			SI monthly report for January 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							3/7/2006	3/9/2006	3/9/2006	2/9/2006	3/9/2006	3/9/2006	3/13/2006	3/9/2006	3/13/2006	3/13/2006	3/14/2006	3/14/2006			RI/FS monthly report for February 2006
CO, p 31	Monthly Progress Reports for the SI						X							3/7/2006	3/9/2006	3/9/2006	2/9/2006	3/9/2006	3/9/2006	3/13/2006	3/9/2006	3/13/2006	3/13/2006	3/14/2006	3/14/2006			SI monthly report for February 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							4/7/2006	4/10/2006	4/9/2006	4/10/2006	4/10/2006	4/10/2006	4/12/2006	4/12/2006	4/13/2006	4/12/2006	4/10/2006	4/15/2006			RI/FS monthly report for March 2006
CO, p 31	Monthly Progress Reports for the SI						X							4/7/2006	4/10/2006	4/9/2006	4/10/2006	4/10/2006	4/10/2006	4/12/2006	4/12/2006	4/13/2006	4/12/2006	4/13/2006	4/15/2006			SI monthly report for March 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							5/8/2006	5/8/2006	5/9/2006	5/10/2006	5/10/2006	5/10/2006	5/10/2006	5/10/2006	5/12/2006	5/11/2006	5/12/2006	5/15/2006			RI/FS monthly report for April 2006
CO, p 31	Monthly Progress Reports for the SI						X							5/8/2006	5/8/2006	5/9/2006	5/10/2006	5/10/2006	5/10/2006	5/10/2006	5/10/2006	5/12/2006	5/11/2006	5/12/2006	5/15/2006			SI monthly report for April 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							6/6/2006	6/6/2006	6/9/2006	6/9/2006	6/9/2006	6/6/2006	6/10/2006	6/9/2006	6/13/2006	6/13/2006	6/14/2006	6/15/2006			RI/FS monthly report for May 2006
CO, p 31	Monthly Progress Reports for the SI						X							6/6/2006	6/6/2006	6/9/2006	6/9/2006	6/9/2006	6/6/2006	6/10/2006	6/9/2006	6/13/2006	6/13/2006	6/14/2006	6/15/2006			SI monthly report for May 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							7/6/2006	7/11/2006	7/9/2006	7/10/2006	7/11/2006	7/12/2006	7/13/2006	7/12/2006	7/13/2006	7/13/2006	7/14/2006	7/15/2006			RI/FS monthly report for June 2006
CO, p 31	Monthly Progress Reports for the SI						X							7/6/2006	7/11/2006	7/9/2006	7/10/2006	7/11/2006	7/12/2006	7/13/2006	7/12/2006	7/13/2006	7/13/2006	7/14/2006	7/15/2006			SI monthly report for June 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							8/10/2006	8/8/2006	8/11/2006	8/10/2006	8/12/2006	8/8/2006	8/13/2006	8/10/2006	8/14/2006	8/12/2006	8/14/2006	8/15/2006			RI/FS monthly report for July 2006
CO, p 31	Monthly Progress Reports for the SI						X							8/10/2006	8/8/2006	8/11/2006	8/10/2006	8/12/2006	8/8/2006	8/13/2006	8/10/2006	8/14/2006	8/12/2006	8/14/2006	8/15/2006			SI monthly report for July 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							9/10/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/12/2006	9/11/2006	9/14/2006	9/14/2006	9/15/2006	9/15/2006			RI/FS monthly report for August 2006
CO, p 31	Monthly Progress Reports for the SI						X							9/10/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/12/2006	9/11/2006	9/14/2006	9/14/2006	9/15/2006	9/15/2006			SI monthly report for Augus 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							10/10/2006	10/9/2006	10/11/2006	10/10/2006	10/11/2006	10/12/2006	10/13/2006	10/12/2006	10/13/2006	10/13/2006	10/13/2006	10/15/2006			RI/FS monthly report for September 2006
CO, p 31	Monthly Progress Reports for the SI						X							10/10/2006	10/9/2006	10/11/2006	10/10/2006	10/11/2006	10/12/2006	10/13/2006	10/12/2006	10/13/2006	10/13/2006	10/13/2006	10/15/2006			SI monthly report for September 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							11/10/2006	11/9/2006	11/13/2006	11/13/2006	11/13/2006	11/13/2006	11/15/2006	11/13/2006	11/14/2006	11/15/2006	11/14/2006	11/15/2006			RI/FS monthly report for October 2006
CO, p 31	Monthly Progress Reports for the SI						X							11/10/2006	11/9/2006	11/13/2006	11/13/2006	11/13/2006	11/13/2006	11/15/2006	11/13/2006	11/14/2006	11/15/2006	11/14/2006	11/15/2006			SI monthly report for October 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							12/11/2006	12/8/2006	12/12/2006	12/11/2006	12/13/2006	12/12/2006	12/13/2006	12/11/2006	12/14/2006	12/13/2006	12/14/2006	12/15/2006			RI/FS monthly report for November 2006
CO, p 31	Monthly Progress Reports for the SI						X							12/11/2006	12/4/2006	12/12/2006	12/11/2006	12/13/2006	12/11/2006	12/13/2006	12/11/2006	12/14/2006	12/13/2006	12/14/2006	12/15/2006			SI monthly report for November 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							1/10/2007	1/10/2007	1/10/2007	1/10/2007	1/10/2007	1/10/2007	1/11/2007	1/10/2007	1/12/2007	1/12/2007	1/12/2007	1/15/2007			RI/FS monthly report for December 2006
CO, p 31	Monthly Progress Reports for the SI						X							1/10/2007	1/10/2007	1/10/2007	1/10/2007	1/10/2007	1/10/2007	1/11/2007	1/10/2007	1/12/2007	1/12/2007	1/12/2007	1/15/2007			SI monthly report for December 2006
CO, p 31	Monthly Progress Reports for the RI/FS						X							2/10/2007	2/9/2007	2/10/2007	2/11/2007	2/12/2007	2/12/2007	2/12/2007	2/12/2007	2/14/2007	2/13/2007	2/14/2007	2/15/2007			RI/FS monthly report for January 2007
CO, p 31	Monthly Progress Reports for the SI						X							2/10/2007	2/9/2007	2/10/2007	2/11/2007	2/12/2007	2/12/2007	2/12/2007	2/12/2007	2/14/2007	2/13/2007	2/14/2007	2/15/2007			SI monthly report for January 2007

CONSENT ORDER SUBMITTAL REGISTER

9/8/2010

REVIEWER ACTION CODES : A = APPROVAL WHOLE OR PART; B = APPROVE WITH SPECIFIED CONDITIONS
C = MODIFY DEFICIENCIES; D = DISAPPROVE WHOLE OR PART; E = COMBINATION

9/1/2005 EFFECTIVE DATE OF CONSENT ORDER

SUBMITTAL REFERENCE: CO = CONSENT ORDER; SOW = STATEMENT OF WORK; Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL: DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORTS	CERTIFICATES	SAMPLES	RECORDS	O&M MANUALS	SUBMITTAL DURATION REQUIRED BY CONSENT ORDER (# of days)	SUBMITTAL PREPARATION & DUE DATE: REVIEW DRAFT TO PREMCOR AND LIBERTY TARGET DATE	REVIEW DRAFT TO PREMCOR AND LIBERTY ACTUAL DATE	PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE TARGET DATE	PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE ACTUAL DATE	FINAL DRAFT TO PREMCOR & LIBERTY TARGET DATE	FINAL DRAFT TO PREMCOR & LIBERTY ACTUAL DATE	FINAL APPROVAL NEEDED BY PREMCOR & LIBERTY TARGET DATE	FINAL APPROVAL NEEDED BY PREMCOR & LIBERTY ACTUAL DATE	TO USPA & IAD (AS APPROPRIATE) TARGET SUBMITTAL DATE	TO USPA & IAD (AS APPROPRIATE) ACTUAL DATE	TO USPA & IAD (AS APPROPRIATE) RECEIPT VERIFIED OR USPA RECEIVED	SUBMITTAL DATE REQUIRED BY CONSENT ORDER	REVIEWER ACTION CODE	REVIEWER ACTION DATE	REMARKS
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	
CO, p 31	Monthly Progress Reports for the RI/FS						X						9/9/2007	9/9/2007	9/12/2007	9/12/2007	9/12/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/14/2007	9/14/2007			RI/FS monthly report for February 2007
CO, p 31	Monthly Progress Reports for the SI						X						9/9/2007	9/9/2007	9/12/2007	9/13/2007	9/12/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/14/2007	9/14/2007			SI monthly report for February 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						4/9/2007	4/10/2007	4/12/2007	4/11/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/13/2007	4/13/2007			RI/FS monthly report for March 2007
CO, p 31	Monthly Progress Reports for the SI						X						4/9/2007	4/10/2007	4/12/2007	4/11/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/12/2007	4/13/2007	4/13/2007			SI monthly report for March 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						5/9/2007	5/9/2007	5/9/2007	5/11/2007	5/10/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/14/2007	5/14/2007			RI/FS monthly report for April 2007
CO, p 31	Monthly Progress Reports for the SI						X						5/9/2007	5/9/2007	5/9/2007	5/11/2007	5/10/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/14/2007	5/14/2007			SI monthly report for April 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						6/8/2007	6/8/2007	6/8/2007	6/11/2007	6/10/2007	6/11/2007	6/11/2007	6/12/2007	6/13/2007	6/13/2007	6/13/2007	6/14/2007	6/15/2007			RI/FS monthly report for May 2007
CO, p 31	Monthly Progress Reports for the SI						X						6/8/2007	6/8/2007	6/8/2007	6/11/2007	6/10/2007	6/11/2007	6/11/2007	6/12/2007	6/13/2007	6/13/2007	6/13/2007	6/14/2007	6/15/2007			SI monthly report for May 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						7/9/2007	7/10/2007	7/10/2007	7/12/2007	7/11/2007	7/11/2007	7/11/2007	7/12/2007	7/13/2007	7/12/2007	7/13/2007	7/13/2007	7/13/2007			RI/FS monthly report for June 2007
CO, p 31	Monthly Progress Reports for the SI						X						7/9/2007	7/10/2007	7/10/2007	7/12/2007	7/11/2007	7/11/2007	7/11/2007	7/12/2007	7/13/2007	7/12/2007	7/13/2007	7/13/2007	7/13/2007			SI monthly report for June 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						8/9/2007	8/10/2007	8/10/2007	8/13/2007	8/11/2007	8/13/2007	8/11/2007	8/13/2007	7/13/2007	8/14/2007	8/13/2007	8/14/2007	8/15/2007			RI/FS monthly report for July 2007
CO, p 31	Monthly Progress Reports for the SI						X						8/9/2007	8/10/2007	8/10/2007	8/13/2007	8/11/2007	8/13/2007	8/11/2007	8/13/2007	7/13/2007	8/14/2007	8/13/2007	8/14/2007	8/15/2007			SI monthly report for July 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						9/10/2007	9/10/2007	9/10/2007	9/11/2007	9/11/2007	9/12/2007	9/12/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/14/2007	9/15/2007			RI/FS monthly report for August 2007
CO, p 31	Monthly Progress Reports for the SI						X						9/10/2007	9/10/2007	9/10/2007	9/11/2007	9/11/2007	9/12/2007	9/12/2007	9/13/2007	9/13/2007	9/13/2007	9/13/2007	9/14/2007	9/15/2007			SI monthly report for August 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						10/10/2007	9/28/2007	10/10/2007	10/11/2007	10/10/2007	10/10/2007	10/10/2007	10/10/2007	10/12/2007	10/10/2007	10/11/2007	10/15/2007	10/15/2007			RI/FS monthly report for September 2007
CO, p 31	Monthly Progress Reports for the SI						X						10/10/2007	9/28/2007	10/10/2007	10/11/2007	10/10/2007	10/10/2007	10/10/2007	10/10/2007	10/12/2007	10/10/2007	10/11/2007	10/15/2007	10/15/2007			SI monthly report for September 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						11/8/2007	11/7/2007	11/13/2007	11/13/2007	11/12/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/14/2007	11/15/2007	11/15/2007	11/15/2007			RI/FS monthly report for October 2007
CO, p 31	Monthly Progress Reports for the SI						X						11/8/2007	11/9/2007	11/9/2007	11/13/2007	11/12/2007	11/13/2007	11/13/2007	11/13/2007	11/13/2007	11/14/2007	11/15/2007	11/15/2007	11/15/2007			SI monthly report for October 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						12/10/2007	12/10/2007	12/11/2007	12/11/2007	12/11/2007	12/12/2007	12/12/2007	12/12/2007	12/13/2007	12/12/2007	12/13/2007	12/15/2007	12/15/2007			RI/FS monthly report for November 2007
CO, p 31	Monthly Progress Reports for the SI						X						12/10/2007	12/10/2007	12/11/2007	12/11/2007	12/11/2007	12/12/2007	12/12/2007	12/12/2007	12/13/2007	12/12/2007	12/13/2007	12/15/2007	12/15/2007			SI monthly report for November 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						1/9/2008	1/7/2008	1/10/2008	1/11/2008	1/10/2008	1/14/2008	1/10/2008	1/14/2008	1/11/2008	1/14/2008	1/11/2008	1/14/2008	1/15/2008			RI/FS monthly report for December 2007
CO, p 31	Monthly Progress Reports for the SI						X						1/9/2008	1/7/2008	1/10/2008	1/13/2008	1/11/2008	1/14/2008	1/10/2008	1/14/2008	1/11/2008	1/14/2008	1/11/2008	1/14/2008	1/15/2008			SI monthly report for December 2007
CO, p 31	Monthly Progress Reports for the RI/FS						X						2/8/2008	2/8/2008	2/11/2008	2/12/2008	2/11/2008	2/8/2008	2/14/2008	2/12/2008	2/14/2008	2/13/2008	2/14/2008	2/15/2008	2/15/2008			RI/FS monthly report for January 2008
CO, p 31	Monthly Progress Reports for the SI						X						2/8/2008	2/8/2008	2/11/2008	2/12/2008	2/11/2008	2/14/2008	2/12/2008	2/14/2008	2/14/2008	2/12/2008	2/14/2008	2/15/2008	2/15/2008			SI monthly report for January 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						3/7/2008	3/7/2008	3/10/2008	3/12/2008	3/10/2008	3/14/2008	3/10/2008	3/14/2008	3/14/2008	3/13/2008	3/14/2008	3/15/2008	3/15/2008			RI/FS monthly report for February 2008
CO, p 31	Monthly Progress Reports for the SI						X						3/7/2008	3/7/2008	3/10/2008	3/13/2008	3/10/2008	3/14/2008	3/10/2008	3/14/2008	3/13/2008	3/14/2008	3/13/2008	3/14/2008	3/15/2008			SI monthly report for February 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						4/10/2008	4/8/2008	4/10/2008	4/9/2008	4/10/2008	4/14/2008	4/14/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/14/2008	4/15/2008			RI/FS monthly report for March 2008
CO, p 31	Monthly Progress Reports for the SI						X						4/10/2008	4/9/2008	4/10/2008	4/9/2008	4/10/2008	4/14/2008	4/14/2008	4/11/2008	4/11/2008	4/11/2008	4/11/2008	4/14/2008	4/15/2008			SI monthly report for March 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						5/10/2008	5/8/2008	5/10/2008	5/9/2008	5/9/2008	5/9/2008	5/14/2008	5/11/2008	5/14/2008	5/14/2008	5/14/2008	5/15/2008	5/15/2008			RI/FS monthly report for April 2008
CO, p 31	Monthly Progress Reports for the SI						X						5/10/2008	5/9/2008	5/10/2008	5/9/2008	5/9/2008	5/9/2008	5/14/2008	5/11/2008	5/14/2008	5/14/2008	5/14/2008	5/15/2008	5/15/2008			SI monthly report for April 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						6/10/2008	6/9/2008	6/10/2008	6/9/2008	6/9/2008	6/12/2008	6/12/2008	6/13/2008	6/13/2008	6/12/2008	6/13/2008	6/13/2008	6/13/2008			RI/FS monthly report for May 2008
CO, p 31	Monthly Progress Reports for the SI						X						6/10/2008	6/9/2008	6/10/2008	6/9/2008	6/9/2008	6/12/2008	6/12/2008	6/13/2008	6/13/2008	6/12/2008	6/13/2008	6/13/2008	6/13/2008			SI monthly report for May 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						7/9/2008	7/9/2008	7/9/2008	7/9/2008	7/11/2008	7/9/2008	7/13/2008	7/10/2008	7/14/2008	7/14/2008	7/15/2008	7/15/2008	7/15/2008			RI/FS monthly report for June 2008
CO, p 31	Monthly Progress Reports for the SI						X						7/9/2008	7/9/2008	7/9/2008	7/9/2008	7/11/2008	7/9/2008	7/13/2008	7/10/2008	7/14/2008	7/14/2008	7/15/2008	7/15/2008	7/15/2008			SI monthly report for June 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						8/7/2008	8/8/2008	8/8/2008	8/8/2008	8/11/2008	8/8/2008	8/13/2008	8/10/2008	8/14/2008	8/14/2008	8/15/2008	8/15/2008	8/15/2008			RI/FS monthly report for July 2008
CO, p 31	Monthly Progress Reports for the SI						X						8/7/2008	8/8/2008	8/8/2008	8/8/2008	8/11/2008	8/8/2008	8/13/2008	8/10/2008	8/14/2008	8/14/2008	8/15/2008	8/15/2008	8/15/2008			SI monthly report for July 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						9/7/2008	9/8/2008	9/8/2008	9/5/2008	9/11/2008	9/5/2008	9/13/2008	9/5/2008	9/14/2008	9/11/2008	9/13/2008	9/15/2008	9/15/2008			RI/FS monthly report for August 2008
CO, p 31	Monthly Progress Reports for the SI						X						9/7/2008	9/8/2008	9/8/2007	9/5/2008	9/11/2008	9/5/2008	9/13/2008	9/8/2008	9/14/2008	9/11/2008	9/13/2008	9/15/2008	9/15/2008			SI monthly report for August 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						10/7/2008	10/8/2008	10/8/2008	10/5/2008	10/9/2008	10/9/2008	10/9/2008	10/9/2008	10/14/2008	10/13/2008	10/14/2008	10/15/2008	10/15/2008			RI/FS monthly report for September 2008
CO, p 31	Monthly Progress Reports for the SI						X						10/7/2008	10/8/2008	10/8/2008	10/5/2008	10/9/2008	10/9/2008	10/9/2008	10/9/2008	10/14/2008	10/13/2008	10/14/2008	10/15/2008	10/15/2008			SI monthly report for September 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						11/7/2008	11/6/2008	11/10/2008	11/4/2008	11/10/2008	11/4/2008	11/11/2008	11/4/2008	11/13/2008	11/12/2008	11/13/2008	11/15/2008	11/15/2008			RI/FS monthly report for October 2008
CO, p 31	Monthly Progress Reports for the SI						X						11/7/2008	10/30/2008	11/9/2008	11/4/2008	11/10/2008	11/4/2008	11/11/2008	11/4/2008	11/13/2008	11/12/2008	11/13/2008	11/15/2008	11/15/2008			SI monthly report for October 2008

CONSENT ORDER SUBMITTAL REGISTER

9/8/2010	REVIEWER ACTION CODES : A = APPROVAL WHOLE OR PART; B = APPROVE WITH SPECIFIED CONDITIONS C = MODIFY DEFICIENCIES; D = DISAPPROVE WHOLE OR PART; E = COMBINATION
9/8/2004	EFFECTIVE DATE OF CONSENT ORDER

SUBMITTAL REFERENCE (CO = CONSENT ORDER, SOW = STATEMENT OF WORK) Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										SUBMITTAL PREPARATION & DUE DATE												REVIEWER ACTION		REMARKS
		DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORTS	CERTIFICATES	SAMPLE LABELS	RECORDS	O&M MANUALS	SUBMITTAL DURATION REQUIRED BY CONSENT ORDER (# of days)	REVIEW DRAFT TO PRIMECOR AND LIBERTY		PRIMECOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PRIMECOR & LIBERTY		FINAL APPROVAL RECEIVED BY PRIMECOR & LIBERTY		TO EPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE REQUIRED BY CONSENT ORDER	CODE	DATE	
													TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED ON LRS RECEIVED				
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	
CO, p 31	Monthly Progress Reports for the RI/FS						X						12/8/2008	12/8/2008	12/8/2008	12/10/2008	12/10/2008	12/11/2008	12/11/2008	12/11/2008	12/12/2008	12/14/2008	12/19/2008	12/15/2008			RI/FS monthly report for November 2008
CO, p 31	Monthly Progress Reports for the SI						X						12/8/2008	12/8/2008	12/8/2008	12/10/2008	12/10/2008	12/11/2008	12/11/2008	12/11/2008	12/12/2008	12/11/2008	12/13/2008	12/15/2008			SI monthly report for November 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						1/8/2009	1/8/2009	1/8/2009	1/12/2009	1/12/2009	1/13/2009	1/13/2009	1/13/2009	1/14/2009	1/13/2009	1/14/2009	1/15/2009			RI/FS monthly report forDecember 2008
CO, p 31	Monthly Progress Reports for the SI						X						1/8/2009	1/8/2009	1/8/2009	1/12/2009	1/12/2009	1/13/2009	1/13/2009	1/13/2009	1/14/2009	1/13/2009	1/14/2009	1/15/2009			SI monthly report for December 2008
CO, p 31	Monthly Progress Reports for the RI/FS						X						2/9/2009	2/10/2009	2/10/2009	2/10/2009	2/11/2009	2/11/2009	2/12/2009	2/11/2009	2/12/2009	2/12/2009	2/13/2009	2/15/2009			RI/FS monthly report for January 2009
CO, p 31	Monthly Progress Reports for the SI						X						2/9/2009	2/10/2009	2/10/2009	2/10/2009	2/11/2009	2/11/2009	2/12/2009	2/11/2009	2/12/2009	2/12/2009	2/13/2009	2/15/2009			SI monthly report for January 2009
CO, p 31	Monthly Progress Reports for the RI/FS						X						3/9/2009	3/9/2009	3/10/2009	3/12/2009	3/11/2009	3/12/2009	3/12/2009	3/12/2009	3/12/2009	3/12/2009	3/13/2009	3/15/2009			RI/FS monthly report for February 2009
CO, p 31	Monthly Progress Reports for the SI						X						3/9/2009	3/9/2009	3/10/2009	3/10/2009	3/11/2009	3/12/2009	3/12/2009	3/12/2009	3/12/2009	3/12/2009	3/13/2009	3/15/2009			SI monthly report for February 2009
CO, p 31	Monthly Progress Reports for the RI/FS						X						4/9/2009	4/8/2009	4/10/2009	4/9/2009	4/13/2009	4/9/2009	4/14/2009	4/9/2009	4/14/2009	4/9/2009	4/10/2009	4/15/2009			RI/FS monthly report for March 2009
CO, p 31	Monthly Progress Reports for the SI						X						4/9/2009	4/8/2009	4/10/2009	4/9/2009	4/13/2009	4/9/2009	4/14/2009	4/9/2009	4/14/2009	4/9/2009	4/10/2009	4/15/2009			SI monthly report for March 2009
CO, p 31	Monthly Progress Reports for the RI/FS						X						5/8/2009	5/11/2009	5/10/2009	5/12/2009	5/11/2009	5/12/2009	5/12/2009	5/12/2009	5/14/2009	5/13/2009	5/14/2009	5/15/2009			RI/FS monthly report for April 2009
CO, p 31	Monthly Progress Reports for the SI						X						5/8/2009	5/11/2009	5/10/2009	5/12/2009	5/11/2009	5/12/2009	5/12/2009	5/12/2009	5/14/2009	5/13/2009	5/14/2009	5/15/2009			SI monthly report for April 2009
CO, p 31	Monthly Progress Reports for the RI/FS						X						6/8/2009	6/8/2009	6/8/2009	6/8/2009	6/10/2009	6/9/2009	6/11/2009	6/11/2009	6/12/2009	6/12/2009	6/16/2009	6/15/2009			RI/FS monthly report for May 2009. No further SI reports required per the May 5, 2009 approval of movement of Parco Foods to the RI/FS Program.
CO, p 31	Monthly Progress Reports for the RI/FS						X						7/8/2009	7/8/2009	7/10/2009	7/10/2009	7/10/2009	7/10/2009	7/13/2009	7/10/2009	7/14/2009	7/13/2009	7/14/2009	7/15/2009			RI/FS monthly report for June 2009.
CO, p 31	Monthly Progress Reports for the RI/FS						X						8/10/2009	8/11/2009	8/11/2009	8/13/2009	8/12/2009	8/13/2009	8/13/2009	8/13/2009	8/13/2009	8/13/2009	8/14/2009	8/15/2009			RI/FS monthly report for July 2009.
CO, p 31	Monthly Progress Reports for the RI/FS						X						9/10/2009	9/10/2009	9/11/2009	9/11/2009	9/11/2009	9/11/2009	9/14/2009	9/11/2009	9/14/2009	9/11/2009	9/14/2009	9/15/2009			RI/FS monthly report for August 2009.
CO, p 31	Monthly Progress Reports for the RI/FS						X						10/9/2009	10/9/2009	10/12/2009	10/12/2009	10/12/2009	10/9/2009	10/13/2009	10/12/2009	10/14/2009	10/13/2009	10/15/2009	10/15/2009			RI/FS monthly report for September 2009.
CO, p 31	Monthly Progress Reports for the RI/FS						X						11/9/2009	10/9/2009	11/10/2009	10/12/2009	11/11/2009	10/9/2009	11/12/2009	11/12/2009	11/12/2009	10/13/2009	11/15/2009	11/15/2009			RI/FS monthly report for October 2009.
CO, p 31	Monthly Progress Reports for the RI/FS						X						12/9/2009	12/7/2009	12/10/2009	12/10/2009	12/11/2009	12/10/2009	12/11/2009	12/10/2009	12/14/2009	12/11/2009	12/14/2009	12/15/2009			RI/FS monthly report for November 2009.
CO, p 31	Monthly Progress Reports for the RI/FS						X						1/11/2010	1/8/2010	1/12/2010	1/11/2010	1/13/2010	1/11/2010	1/13/2010	1/11/2010	1/14/2010	1/13/2010	1/15/2010	1/15/2010			RI/FS monthly report for December 2009.
CO, p 31	Monthly Progress Reports for the RI/FS						X						2/10/2010	2/10/2010	2/11/2010	2/11/2010	2/11/2010	2/11/2010	2/12/2010	2/11/2010	2/11/2010	2/12/2010	2/15/2010	2/15/2010			RI/FS monthly report for January 2010. Electronic copies submitted 2/12/2010. Hard copy delivery attempted on 2/12/2010 and 2/15/2010 - IEPA/IAG offices closed.
CO, p 31	Monthly Progress Reports for the RI/FS						X						3/10/2010	3/10/2010	3/11/2010	3/12/2010	3/11/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/15/2010	3/15/2010			RI/FS monthly report for February 2010. Electronic and hard copies submitted 3/12/2010.
CO, p 31	Monthly Progress Reports for the RI/FS						X						4/12/2010	4/12/2010	4/13/2010	4/13/2010	4/13/2010	4/13/2010	4/13/2010	4/13/2010	4/13/2010	4/14/2010	4/15/2010	4/15/2010			RI/FS monthly report for March 2010. Hard copies submitted 4/14/2010. Electronic copies submitted 4/15/2010.
CO, p 31	Monthly Progress Reports for the RI/FS						X						5/11/2010	5/11/2010	5/13/2010	5/13/2010	5/13/2010	5/11/2010	5/14/2010	5/11/2010	5/14/2010	5/12/2010	5/14/2010	5/15/2010			RI/FS monthly report for April 2010. Hard copies submitted 5/12/2010. Electronic copies submitted 5/14/2010.
CO, p 31	Monthly Progress Reports for the RI/FS						X						6/11/2010	6/10/2010	6/14/2010	6/11/2010	6/14/2010	6/11/2010	6/14/2010	6/14/2010	6/14/2010	6/14/2010	6/15/2010	6/15/2010			RI/FS monthly report for May 2010. Hard copies submitted 6/14/2010. Electronic copies submitted 6/14/2010.
CO, p 31	Monthly Progress Reports for the RI/FS						X						7/12/2010	7/12/2010	7/13/2010	7/13/2010	7/13/2010	7/13/2010	7/14/2010	7/13/2010	7/14/2010	7/13/2010	7/14/2010	7/15/2010			RI/FS monthly report for June 2010. Hard copies submitted 6/14/2010. Electronic copies submitted 6/14/2010.
CO, p 31	Monthly Progress Reports for the RI/FS						X						8/9/2010	8/10/2010	8/10/2010	9/11/2010	8/11/2010	8/11/2010	8/12/2010	8/11/2010	8/12/2010	8/11/2010	8/13/2010	8/15/2010			RI/FS monthly report for July 2010. Hard copies submitted 8/11/2010. Electronic copies submitted 8/12/2010
	CO, SECTION X.25																										
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											9/8/2004	9/13/2004	9/10/2004	9/13/2004	9/11/2004	9/13/2004	9/13/2004	9/13/2004	9/13/2004	9/14/2004	9/15/2004	9/15/2004			Submitted in the August 2004 monthly progress reports.
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											10/8/2004	10/12/2004	10/11/2004	10/12/2004	10/11/2004	10/13/2004	10/12/2004	10/13/2004	10/13/2004	10/14/2004	10/15/2004	10/15/2004			Submitted in the September 2004 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											11/8/2004	11/10/2004	11/10/2004	11/12/2004	11/11/2004	12/11/2004	11/12/2004	11/11/2004	11/12/2004	11/12/2004	11/15/2004	11/15/2004			Submitted in the October 2004 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											12/7/2004	12/10/2004	12/8/2004	12/10/2004	12/9/2004	12/10/2004	12/10/2004	12/10/2004	12/10/2004	12/13/2004	12/15/2004	12/15/2004			Submitted in the November 2004 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											1/7/2005	1/7/2005	1/10/2005	1/10/2005	1/11/2005	1/11/2005	1/12/2005	1/11/2005	1/12/2005	1/12/2005	1/15/2005	1/15/2005			Submitted in the December 2004 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											2/9/2005	2/11/2005	2/10/2005	2/11/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/14/2005	2/15/2005	2/15/2005			Submitted in the January 2005 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											3/9/2005	3/11/2005	3/10/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/14/2005	3/15/2005	3/15/2005			Submitted in the February 2005 monthly progress reports.
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											4/8/2005	4/11/2005	4/12/2005	4/13/2005	4/14/2005	4/13/2005	4/14/2005	4/13/2005	4/14/2005	4/14/2005	4/15/2005	4/15/2005			Submitted in the March 2005 monthly progress reports.
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											5/7/2005	5/9/2005	5/10/2005	5/9/2005	5/9/2005	5/9/2005	5/10/2005	5/9/2005	5/13/2005	5/13/2005	5/12/2005	5/15/2005			Submitted in the April monthly progress reports.
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											6/6/2005	6/8/2005	6/9/2005	6/6/2005	6/8/2005	6/8/2005	6/9/2005	6/10/2005	6/13/2005	6/14/2005	6/15/2005	6/15/2005			Submitted in the May monthly progress reports.
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											7/6/2005	7/8/2005	7/7/2005	7/8/2005	7/6/2005	7/6/2005	7/7/2005	7/8/2005	7/13/2005	7/11/2005	7/12/2005	7/15/2005			Submitted in the June monthly progress reports. Chains of Custody included in report, but no raw data received here.
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											8/8/2005	8/8/2005	8/7/2005	8/8/05	8/8/2005	8/8/2005	8/8/2005	8/8/2005	8/12/2005	8/11/2005	8/12/2005	8/15/2005			Submitted in the July monthly progress reports.

CONSENT ORDER SUBMITTAL REGISTER

9/8/2010

REVIEWER ACTION CODES : A = APPROVAL WHOLE OR PART; B = APPROVE WITH SPECIFIED CONDITIONS
C = MODIFY DEFICIENCIES; D = DISAPPROVE WHOLE OR PART; E = COMBINATION

X1/2006 EFFECTIVE DATE OF CONSENT ORDER

SUBMITTAL REFERENCE CO = CONSENT ORDER SOW = STATEMENT OF WORK Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL											SUBMITTAL PREPARATION & DUE DATE												REVIEWER ACTION		REMARKS
		DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORTS	CERTIFICATES	SAMPLES	RECORDS	O&M MANUALS		SUBMITTAL DURATION REQUIRED BY CONSENT ORDER (# of days)	REVIEW DRAFT TO PREMCOR AND LIBERTY		PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PREMCOR & LIBERTY		FINAL APPROVAL NEEDED BY PREMCOR & LIBERTY		TO IEPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE INCLUDES BY CONSENT ORDER	CODE	DATE	
														TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED ON URS RECEIVED				
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												9/6/2005	9/7/2005	9/7/2005	9/7/2005	9/8/2005	9/7/2005	9/8/2005	9/8/2005	9/12/2005	9/13/2005	9/14/2005	9/13/2005			Submitted in the August monthly progress reports.
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												10/5/2005	10/7/2005	10/10/2005	10/10/2005	10/9/2005	10/10/2005	10/8/2005	10/10/2005	10/12/2005	10/13/2005	10/14/2005	10/13/2005			Submitted in September monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												11/7/2005	11/4/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/8/2005	11/11/2005	11/11/2005	11/14/2005	11/13/2005			Submitted in October 2005 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												12/6/2005	12/8/2005	12/7/2005	12/8/2005	12/8/2005	12/9/2005	12/9/2005	12/8/2005	12/13/2005	12/13/2005	12/14/2005	12/13/2005			Submitted in November 2005 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												1/6/2006	1/9/2006	1/7/2006	1/10/2006	1/6/2006	1/10/2006	1/9/2006	1/10/2006	1/13/2006	1/10/2006	1/13/2006	1/13/2006			Submitted in December 2005 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												2/6/2006	2/6/2006	2/10/2006	2/9/2006	2/10/2006	2/9/2006	2/10/2006	2/10/2006	2/13/2006	2/13/2006	2/14/2006	2/13/2006			Submitted in January 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												3/7/2006	3/9/2006	3/9/2006	3/9/2006	3/9/2006	3/10/2006	3/10/2006	3/9/2006	3/13/2006	3/13/2006	3/14/2006	3/14/2006			Submitted in February 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												4/7/2006	4/10/2006	4/9/2006	4/10/2006	4/10/2006	4/10/2006	4/12/2006	4/12/2006	4/13/2006	4/12/2006	4/13/2006	4/13/2006			Submitted in March 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												5/8/2006	5/8/2006	5/9/2006	5/10/2006	5/10/2006	5/10/2006	5/10/2006	5/10/2006	5/12/2006	5/11/2006	5/13/2006	5/13/2006			Submitted in April 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												6/6/2006	6/8/2006	6/8/2006	6/9/2006	6/9/2006	6/10/2006	6/9/2006	6/9/2006	6/13/2006	6/13/2006	6/14/2006	6/13/2006			Submitted in May 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												7/6/2006	7/11/2006	7/9/2006	7/13/2006	7/11/2006	7/12/2006	7/13/2006	7/13/2006	7/13/2006	7/13/2006	7/14/2006	7/13/2006			Submitted in June 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												8/10/2006	8/3/2006	8/11/2006	8/10/2006	8/12/2006	8/9/2006	8/10/2006	8/10/2006	8/14/2006	8/12/2006	8/14/2006	8/14/2006			Submitted in July 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												9/10/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/11/2006	9/12/2006	9/11/2006	9/14/2006	9/14/2006	9/15/2006	9/15/2006			Submitted in August 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												10/10/2006	10/3/2006	10/11/2006	10/13/2006	10/12/2006	10/10/2006	10/12/2006	10/12/2006	10/13/2006	10/13/2006	10/13/2006	10/13/2006			Submitted in September 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												11/10/2006	11/9/2006	11/11/2006	11/13/2006	11/13/2006	11/13/2006	11/13/2006	11/13/2006	11/14/2006	11/13/2006	11/14/2006	11/14/2006			Submitted in October 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												12/11/2006	12/8/2006	12/12/2006	12/11/2006	12/13/2006	12/13/2006	12/13/2006	12/11/2006	12/14/2006	12/13/2006	12/14/2006	12/13/2006			Submitted in November 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												1/10/2007	1/9/2007	1/10/2007	1/10/2007	1/10/2007	1/10/2007	1/11/2007	1/10/2007	1/12/2007	1/11/2007	1/12/2007	1/12/2007			Submitted in December 2006 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												2/10/2007	2/1/2007	2/10/2007	2/11/2007	2/12/2007	2/12/2007	2/12/2007	2/12/2007	2/14/2007	2/13/2007	2/14/2007	2/13/2007			Submitted in January 2007 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												3/9/2007	3/5/2007	3/12/2007	3/13/2007	3/12/2007	3/13/2007	3/13/2007	3/13/2007	3/13/2007	3/13/2007	3/14/2007	3/13/2007			Submitted in February 2007 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												4/9/2007	4/10/2007	4/12/2007	4/11/2007	4/12/2007	4/10/2007	4/12/2007	4/10/2007	4/12/2007	4/12/2007	4/13/2007	4/13/2007			Submitted in March 2007 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												5/9/2007	5/8/2007	5/11/2007	5/10/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/11/2007	5/14/2007	5/13/2007			Submitted in April 2007 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												6/8/2007	6/6/2007	6/8/2007	6/11/2007	6/10/2007	6/11/2007	6/11/2007	6/12/2007	6/13/2007	6/13/2007	6/14/2007	6/13/2007			Submitted in May 2007 monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												8/9/2007	7/19/2007	8/10/2007	8/13/2007	8/11/2007	8/13/2007	8/11/2007	8/13/2007	7/13/2007	8/14/2007	8/15/2007	8/15/2007			Submitted in July 2007 RI/FS monthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												9/10/2007	8/10/2007	9/10/2007	9/11/2007	9/12/2007	9/12/2007	9/12/2007	9/12/2007	9/13/2007	9/14/2007	9/13/2007	9/13/2007			Submitted in August 2007 RI/FS monthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												10/10/2007	9/28/2007	10/10/2007	10/1/2007	10/10/2007	10/8/2007	10/12/2007	10/8/2007	10/12/2007	10/10/2007	10/11/2007	10/11/2007			Submitted in September 2007 RI/FS monthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												11/9/2007	11/5/2007	11/9/2007	11/13/2007	11/12/2007	11/13/2007	11/13/2007	11/13/2007	11/14/2007	11/14/2007	11/15/2007	11/15/2007			Submitted in October 2007 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												12/10/2007	12/10/2007	12/11/2007	12/11/2007	12/11/2007	12/13/2007	12/12/2007	12/12/2007	12/15/2007	12/13/2007	12/15/2007	12/15/2007			Submitted in November 2007 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												1/9/2008	1/7/2008	1/10/2008	1/10/2008	1/11/2008	1/10/2008	1/14/2008	1/10/2008	1/14/2008	1/11/2008	1/14/2008	1/14/2008			Submitted in December 2007 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												2/8/2008	2/8/2008	2/11/2008	2/12/2008	2/11/2008	2/8/2008	2/14/2008	2/12/2008	2/14/2008	2/13/2008	2/14/2008	2/15/2008			Submitted in January 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												3/7/2008	3/7/2008	3/10/2008	3/10/2008	2/11/2008	2/14/2008	3/14/2008	3/10/2008	3/14/2008	3/13/2008	3/14/2008	3/14/2008			Submitted in February 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												4/10/2008	4/9/2008	4/10/2008	4/9/2008	4/10/2008	4/14/2008	4/14/2008	4/11/2008	4/11/2008	4/11/2008	4/14/2008	4/15/2008			Submitted in March 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												5/10/2008	5/9/2008	5/10/2008	5/9/2008	5/9/2008	5/9/2008	5/14/2008	5/11/2008	5/14/2008	5/14/2008	5/14/2008	5/15/2008			Submitted in April 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												6/10/2008	6/9/2008	6/10/2008	6/9/2008	6/9/2008	6/12/2008	6/13/2008	6/10/2008	6/13/2008	6/12/2008	6/13/2008	6/13/2008			Submitted in May 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												7/9/2008	7/9/2008	7/9/2008	7/9/2008	7/11/2008	7/9/2008	7/10/2008	7/10/2008	7/14/2008	7/14/2008	7/15/2008	7/15/2008			Submitted in June 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												8/7/2008	8/8/2008	8/8/2008	8/8/2008	8/11/2008	8/8/2008	8/13/2008	8/13/2008	8/14/2008	8/14/2008	8/15/2008	8/15/2008			Submitted in July 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												9/7/2008	9/5/2008	9/8/2008	9/5/2008	9/11/2008	9/5/2008	9/13/2008	9/8/2008	9/14/2008	9/11/2008	9/13/2008	9/15/2008			Submitted in August 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												11/7/2008	10/30/2008	11/6/2008	11/4/2008	11/10/2008	11/4/2008	11/11/2008	11/4/2008	11/13/2008	11/12/2008	11/13/2008	11/13/2008			Submitted in October 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												12/8/2008	12/8/2008	12/8/2008	12/10/2008	12/10/2008	12/11/2008	12/11/2008	12/11/2008	12/12/2008	12/11/2008	12/13/2008	12/13/2008			Submitted in November 2008 RI/FS and SI monthly progress reports
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												6/9/2009	6/9/2009	6/9/2009	6/9/2009	6/10/2009	6/9/2009	6/11/2009	6/11/2009	6/12/2009	6/12/2009	6/15/2009	6/15/2009			Submitted in May 2009 RI/FSmonthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												7/9/2009	7/9/2009	7/10/2009	7/10/2009	7/10/2009	7/10/2009	7/13/2009	7/10/2009	7/14/2009	7/13/2009	7/14/2009	7/15/2009			Submitted in June 2009 RI/FSmonthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												8/10/2009	8/11/2009	8/11/2009	8/13/2009	8/12/2009	8/13/2009	8/13/2009	8/13/2009	8/13/2009	8/13/2009	8/14/2009	8/15/2009			Submitted in July 2009 RI/FSmonthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X												12/9/2009	12/7/2009	12/10/2009	12/10/2009	12/11/2009	12/10/2009	12/11/2009	12/11/2009	12/14/2009	12/11/2009	12/14/2009	12/14/2009			Submitted in November 2009 RI/FSmonthly progress report

CONSENT ORDER SUBMITTAL REGISTER

9/8/2010	REVIEWER ACTION CODES : A = APPROVAL WHOLE OR PART; B = APPROVE WITH SPECIFIED CONDITIONS C = MODIFY DEFICIENCIES; D = DISAPPROVE WHOLE OR PART; E = COMBINATION
9/7/2004	EFFECTIVE DATE OF CONSENT ORDER

SUBMITTAL REFERENCE CO = CONSENT ORDER SOW = STATEMENT OF WORK Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										SUBMITTAL PREPARATION & DUE DATE												REVIEWER ACTION		REMARKS
		DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORTS	CERTIFICATES	SAMPLES	RECORDS	O&M MANUALS	SUBMITTAL DURATION REQUIRED BY CONSENT ORDER OR SOW	REVIEW DRAFT TO PREMCOR AND LIBERTY		PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PREMCOR & LIBERTY		FINAL APPROVAL NEEDED BY PREMCOR & LIBERTY		TO IEPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE REQUIRED BY CONSENT ORDER	CODE	DATE	
													TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED ON IURS RECEIVED				
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x		x	aa	
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											1/11/2010	1/8/2010	1/12/2010	1/11/2010	1/13/2010	1/11/2010	1/13/2010	1/11/2010	1/14/2010	1/15/2010	1/15/2010	1/15/2010			Submitted in December 2009 RI/FS monthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											2/10/2010	2/10/2010	2/11/2010	2/11/2010	2/11/2010	2/13/2010	2/12/2010	2/11/2010	2/11/2010	2/12/2010	2/16/2010	2/15/2010			Submitted in January 2010 RI/FS monthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											5/11/2010	5/11/2010	5/12/2010	5/11/2010	5/13/2010	5/11/2010	5/14/2010	5/11/2010	5/14/2010	5/14/2010	5/14/2010	5/14/2010			Submitted in April 2010 RI/FS monthly progress report
CO, p 32	Data, Results of Sampling, Tests, Modeling	X											6/11/2010	6/10/2010	6/14/2010	6/15/2010	6/14/2010	6/11/2010	6/14/2010	6/14/2010	6/14/2010	6/14/2010	6/15/2010	6/15/2010			Submitted in May 2010 RI/FS monthly progress report
	CO, SECTION X.26																										
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	7/21/2004	7/20/2004	7/21/2004	7/22/2004	7/22/2004	7/22/2004	7/22/2004	7/22/2004	7/23/2004	7/23/2004	7/23/2004	7/23/2004			RI/FS field activities (geoprobe phase) began on August 11, 2004
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	8/14/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/17/2005	8/18/2005	8/18/2005	8/18/2005	8/18/2005	8/19/2005	8/18/2005			RI/FS field activities (hollow stem auger phase) began on August 11, 2004
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	5/15/2005	5/4/2005	5/16/2005	5/5/2005	5/16/2005	5/5/2005	5/16/2005	5/5/2005	5/17/2005	5/5/2005	5/5/2005	5/5/2005			RI/FS field activities (hollow stem auger phase) began on May 29, 2005
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	6/3/2005	6/3/2005	6/4/2005	6/4/2005	6/4/2005	6/4/2005	6/5/2005	6/5/2005	6/5/2005	6/5/2005	6/5/2005	6/5/2005			RI/FS field activities (hollow stem auger phase) began on June 8, 2005
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	8/11/2005	8/1/2005	8/2/2005	8/2/2005	8/4/2005	8/4/2005	8/5/2005	8/5/2005	8/8/2005	8/5/2005	8/7/2005	8/7/2005			RI/FS field activities (hollow stem auger phase) began September 21, 2005
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	9/30/2005	9/30/2005	10/3/2005	10/3/2005	10/3/2005	10/4/2005	10/4/2005	10/4/2005	10/4/2005	10/4/2005	10/5/2005	10/5/2005			RI/FS field activities (product delineation) began October 20, 2005
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	12/15/2005	12/15/2005	12/16/2005	12/16/2005	12/19/2005	12/19/2005	12/19/2005	12/19/2005	12/20/2005	12/20/2005	12/21/2005	12/21/2005			RI/FS field activities (second quarterly sampling event) began January 9, 2006
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	3/16/2006	3/15/2006	3/17/2006	3/15/2006	3/16/2006	3/28/2006	3/19/2006	3/28/2006	3/21/2006	3/27/2006	3/29/2006	3/22/2006			RI/FS field activities (third quarterly sampling event) began April 5, 2006
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	5/5/2006	5/5/2006	5/8/2006	5/8/2006	5/5/2006	5/5/2006	5/8/2006	5/5/2006	5/8/2006	5/8/2006	5/8/2006	5/8/2006			RI/FS field activities (final field mobilization) begins May 22, 2006.
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	5/24/2006	5/24/2006	5/24/2006	5/24/2006	5/24/2006	5/24/2006	5/24/2006	5/24/2006	5/25/2006	5/25/2006	5/25/2006	5/25/2006			Risk Assessment Site Visit (June 8, 2006)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	6/19/2006	6/20/2006	6/19/2006	6/20/2006	6/20/2006	6/20/2006	6/20/2006	6/20/2006	6/20/2006	6/20/2006	6/20/2006	6/21/2006			July 2006 Quarterly GW Sampling (July 5, 2006)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	9/17/2006	9/19/2006	9/18/2006	9/19/2006	9/19/2006	9/19/2006	9/20/2006	9/19/2006	9/20/2006	9/20/2006	9/20/2006	9/20/2006			October 2006 Quarterly GW Sampling (October 9, 2006)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	12/17/2006	12/15/2006	12/15/2006	12/15/2006	12/18/2006	12/18/2006	12/18/2006	12/18/2006	12/19/2006	12/18/2006	12/19/2006	12/19/2006			January 2007 Quarterly GW Sampling (January 9, 2007)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	3/12/2007	3/8/2007	3/13/2007	3/8/2007	3/13/2007	3/5/2007	3/13/2007	3/8/2007	3/14/2007	3/9/2007	3/10/2007	3/14/2007			April 2007 Quarterly GW Sampling (April 3, 2007)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	6/15/2007	6/28/2007	6/17/2007	6/29/2007	6/18/2007	6/28/2007	6/19/2007	6/28/2007	6/19/2007	6/29/2007	6/29/2007	6/19/2007			July 2007 Quarterly GW Sampling (July 9, 2007)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	9/7/2007	9/7/2007	9/10/2007	9/7/2007	9/10/2007	9/7/2007	9/19/2007	9/7/2007	9/11/2007	9/7/2007	9/13/2007	9/11/2007			October 2007 Quarterly GW Sampling (October 1, 2007)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	8/8/2007	8/6/2007	8/9/2007	8/8/2007	8/9/2007	8/8/2007	8/10/2007	8/8/2007	8/13/2007	8/8/2007	8/9/2007	8/13/2007			Bedrock Step-Out Activities and Parco IRAP Activities (August 6, 2007)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	12/19/2007	12/12/2007	12/20/2007	12/12/2007	12/21/2007	12/12/2007	12/21/2007	12/12/2007	12/21/2007	12/13/2007	12/13/2007	12/24/2007			January 2008 Quarterly GW Sampling (December 12, 2007)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	3/13/2008	3/13/2008	3/14/2008	3/14/2008	3/17/2008	3/14/2008	3/24/2008	3/14/2008	3/24/2008	3/14/2008	3/14/2008	3/28/2008			April 2008 Quarterly GW Sampling (April 9, 2008)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	4/12/2008	4/8/2008	4/12/2008	4/8/2008	4/12/2008	4/15/2008	4/13/2008	4/8/2008	4/15/2008	4/8/2008	4/10/2008	4/15/2008			Additional IRAP activities at Area 7 the Parco Foods Property (April 29, 2008)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	6/19/2008	6/14/2008	6/19/2008	6/14/2008	6/19/2008	6/14/2008	6/20/2008	6/18/2008	6/23/2008	6/17/2008	6/17/2008	6/23/2008			July 2008 Quarterly GW Sampling (July 7, 2008)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	9/22/2008	9/19/2008	9/23/2008	9/19/2008	9/22/2008	9/19/2008	9/23/2008	9/19/2008	9/19/2008	9/19/2008	9/20/2008	9/22/2008			October 2008 Quarterly GW Sampling (October 8, 2008)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	4/6/2009	4/6/2009	4/7/2009	4/9/2009	4/8/2009	4/9/2009	4/8/2009	4/9/2009	4/8/2009	4/9/2009	4/9/2009	4/8/2009			April 2009 Semi-Annual GW Sampling (April 9, 2009)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	6/5/2009	6/8/2009	6/8/2009	6/9/2009	6/9/2009	6/10/2009	6/10/2009	6/8/2009	6/9/2009	6/8/2009	6/10/2009	6/10/2009			2009 Additional Bedrock Step-out Investigation (6/9/09)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	7/7/2009	7/16/2009	7/7/2009	7/15/2009	7/7/2009	7/15/2009	7/7/2009	7/15/2009	7/7/2009	7/15/2009	7/16/2009	7/16/2009			July 2009 Quarterly GW Levels
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	9/16/2009	9/16/2009	9/17/2009	9/16/2009	9/18/2009	9/16/2009	9/18/2009	9/16/2009	9/18/2009	9/17/2009	9/17/2009	9/21/2009			October 2009 Semi-Annual Sampling Event (week of October 5, 2009)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	11/3/2009	11/3/2009	11/4/2009	11/4/2009	11/4/2009	11/4/2009	11/4/2009	11/4/2009	11/4/2009	11/4/2009	11/4/2009	11/4/2009			November 2009 Bedrock delineation and Wetland deermination activities (week of November 16, 2009)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	12/22/2009	12/18/2009	12/23/2009	12/18/2009	12/23/2009	12/18/2009	12/29/2009	12/18/2009	12/29/2009	12/21/2009	12/21/2009	12/24/2009			January 2010 quarterly groundwater level measurements (Jan 12-13, 2010)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/10/2010	3/12/2010	3/12/2010	3/12/2010	3/12/2010	3/15/2010	3/22/2010			April 2010 semi-annual groundwater sampling event (April 5, 2010)
CO, p 32	Written notification 14 days prior to conducting significant field events					X						14	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/12/2010	5/15/2010	4/26/2010			Well Abandonment Activities (May 2010)
	CO, SECTION X.30																										
CO, p 35	Obtain site access agreements from the present Owner(s)					X						90	3/28/2004		6/26/2004		4/5/2004		4/7/2004		4/10/2004	4/14/2004	4/15/2004	4/15/2004			Memo to IEPA about title search and access agreement
	CO, SECTION XII.32																										
CO, p 37	IEPA and Premcor designate their own project manager					X						14	3/29/2004		6/21/2004		3/23/2004		3/24/2004		3/25/2004	3/25/2004	3/29/2004	3/29/2004			

CONSENT ORDER SUBMITTAL REGISTER

9/6/2010

REVIEWER ACTION CODES : A = APPROVAL WHOLE OR PART; B = APPROVE WITH SPECIFIED CONDITIONS
C = MODIFY DEFICIENCIES; D = DISAPPROVE WHOLE OR PART; E = COMBINATION

Effective **EFFECTIVE DATE OF CONSENT ORDER**

SUBMITTAL REFERENCE CO = CONSENT ORDER; SOW = STATEMENT OF WORK; Consent Order Page Number	DESCRIPTION OF ITEM SUBMITTED	TYPE OF SUBMITTAL										SUBMITTAL PREPARATION & DUE DATE												REVIEWER ACTION		REMARKS
		DATA	DRAWINGS	PLANS	SCHEDULES	CORRESPONDENCE	REPORTS	CERTIFICATES	SAMPLES	RECORDS	QA&M MANUALS	SUBMITTAL DURATION REQUIRED BY CONSENT ORDER (# of days)	REVIEW DRAFT TO PREMCOR AND LIBERTY		PREMCOR & LIBERTY REVIEW & COMMENT COMPLETE		FINAL DRAFT TO PREMCOR & LIBERTY		FINAL APPROVAL NEEDED BY PREMCOR & LIBERTY		TO IEPA & IAG (AS APPROPRIATE)			SUBMITTAL DATE REQUIRED BY CONSENT ORDER	CODE	DATE	
													TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET DATE	ACTUAL DATE	TARGET SUBMITTAL DATE	ACTUAL DATE	RECEIPT VERIFIED OR UPS RECEIVED				
a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	
	CO, SECTION XVIII.56																										
CO, p 52	Submit a check to the IEPA (copy to IAG) for all past response costs incurred by State					X						15	3/21/2004		3/29/2004		3/24/2004		3/25/2004		3/26/2004	3/25/2004	3/25/2004	3/31/2004			
	CO, SECTION XIX.60																										
	Periodic bill for costs incurred by IEPA and IAG from July 2003 through December 2003																						4/23/2004				
CO, p 53	Reimbursement of response and oversight costs on and after July 1, 2003					X						30											5/11/2004	5/23/2004			
CO, p 53	Reimbursement of response and oversight costs on and after July 1, 2004					X						30											9/14/2004				
	Periodic bill for costs incurred by IEPA and IAG from January 2004 through June 2004																						10/7/2004				
CO, p 53	Reimbursement of response and oversight costs incurred and paid from January 2004 through June 2004					X						30											10/27/2004	11/4/2004			
	Periodic bill for costs incurred by IEPA and IAG from July 2004 through September 2004																						12/9/2004				
CO, p 53	Reimbursement of response and oversight costs incurred and paid from July 2004 through September 2004					X						30											12/21/2004	1/3/2005			
	Periodic bill for costs incurred by IEPA from October 2004 through December 2004																						3/11/2005				
CO, p 53	Reimbursement of response and oversight costs incurred and paid from October 2004 through December 2004					X						30											3/28/2005	4/12/2005			
CO, p 54	Reimbursement of response and oversight costs incurred and paid from January 2005 through March 2005					X																	7/21/2005				
CO, p 53	Reimbursement of response and oversight costs incurred and paid from January 2007 through June 2007					X																	10/29/2007				
	CO, SECTION XXIII.72																										
CO, p 61	Provide a bond, letter of credit, or other similar instrument or assurance to the IEPA					X						15	9/21/2004		9/29/2004		9/24/2004		9/25/2004		9/26/2004	9/29/2004	9/29/2004	9/31/2004			
	CO, SECTION XXIII.73																										
CO, p 63	Provide certificate of insurance and insurance policy to IEPA							X				0	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/11/2004			Prior to commencement of any work under this order
CO, p 63	Certify insurance has been obtained by Contractor											7	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/9/2004	9/16/2004	9/11/2004			
CO, p 63	Provide certificate of insurance and insurance policy to IEPA							X				365	9/7/2005		9/9/2005		9/10/2005		9/11/2005		9/12/2005	9/11/2005	9/16/2005	9/16/2005			Annually on the effective date of this order
CO, p 63	Provide certificate of insurance and insurance policy to IEPA							X				365	9/7/200X		9/9/200X		9/10/200X		9/11/200X		9/12/200X	9/11/200X	9/16/200X	9/16/2006			Annually on the effective date of this order
CO, p 63	Provide certificate of insurance and insurance policy to IEPA							X				365	9/7/200X		9/9/200X		9/10/200X		9/11/200X		9/12/200X	9/11/2007	9/16/2007	9/16/2007			Annually on the effective date of this order
CO, p 63	Provide certificate of insurance and insurance policy to IEPA							X				365	9/7/200X		9/9/200X		9/10/200X		9/11/200X		9/12/200X	9/11/2008	9/16/2008	9/16/2008			Annually on the effective date of this order
CO, p 63	Provide certificate of insurance and insurance policy to IEPA							X				365	9/7/200X		9/9/200X		9/10/200X		9/11/200X		9/12/200X	9/11/2009	9/16/2009	9/16/2009			Annually on the effective date of this order
CO, p 63	Provide certificate of insurance and insurance policy to IEPA							X				365	9/7/200X		9/9/200X		9/10/200X		9/11/200X		9/12/200X	9/11/2010	9/16/2010	9/16/2010			Annually on the effective date of this order
	CO, SECTION XXV.79																										
CO, p 65	Request for Certification of Completion for SI					X																					
	CO, SECTION XXV.80																										
CO, p 66	Certification by Premcor for Certification of Completion for RI/FS					X																					

Determination: Cleanup?

PA/VSI Or RFA FILE REVIEW CHECKLIST

Facility Name: Premcor Refining Group_____

EPA ID: ILD 005 109 822_____ City: _Blue Island____ State: IL___

Name of Reviewer: Maureen McHugh_____ Date of Review: 7/31/08_____

1	Yes	No	Is this a one folder site?
2	Yes	No	Are there Superfund files for this site?
3	Yes	No	Did you Read the Executive Summary?
			There are: __22__ SWMUs and __2___ AOCs at this site.
4	Yes	No	Did you review the regulatory history?
5	Yes	No	Does the facility have interim status or a permit?
			This facility is a: ____ SQG, __X___ LQG, or _____ Less than 90 day.
6	Yes	No	Was the Facility closed per RCRA? RCRAInfo 380 (1994)
			If Yes, was the closure: _X___ CC, or _____ CIP.
7	Yes	No	Are there documented (historical) releases? Briefly describe on Page 2.
8	Yes	No	Were there releases identified during the inspection? Briefly describe on Page 2.
9	Yes	No	Do you agree with the Conclusions and Recommendations?
			If No, briefly describe on Page 2.

As a result of your review of the PA/VSI or RFA file, please classify this site as:

_____ No further corrective action recommended or warranted: These are sites that closed the regulated units and any other SWMUs or AOCs at the site did not warrant any further corrective action (no historic releases or evidence of releases observed during the Visual Site Inspection).

_X___ Further Action Required: Soil or sediment sampling or groundwater sampling or monitoring or any type of investigation that was recommended in the report in response to a documented or observed release at any SWMU or AOC and where such investigation, whether being addressed during the inspection or after, does not have the necessary documentation in the facility record files.

_____ More Information Needed: There is no RFA, PA/VSI or RCRA closure information available.

PA/VSI Or RFA FILE REVIEW CHECKLIST

Notes
AOC2- 2 4000gal metal bulk USTs used for leaded and unleaded gasoline. Installed in the 1970s and no secondary containment.

Briefly describe any documented (historical) releases for any SWMU or AOC recorded in the report. For each release, please identify the SWMU or AOC and a one or two line description of release.

50gal of retained oil was released into the Calumet Sag Channel in 1973. The oil was entrapped and skimmed from the water surface.

Benzene was observed coming out of the ground in 1987.

A 6mi long oil sheen was observed on the Calumet Sag Channel originating from the facility. The discharge was boomed off.

Leakage of product oil contaminated the soil in 1989. The spill was pumped into the wastewater treatment system and the contaminated soil was removed and disposed of.

Gas oil was spilled in 1990 and the contaminated soil was removed and disposed of. Some gas oil was also released into the storm sewer and Mosquito Creek.

Asphalt was spilled onto the ground and hardened. Sand was used to absorb the asphalt's oily nature and 200yd^3 of contaminated soil was removed and disposed of.

Briefly describe any releases observed during the inspection for any SWMU or AOC recorded in the report. For each release, please identify the SWMU or AOC and a one or two line description of release.

Sulfur powder product was observed on the onsite soil.

A condensate knockoff tank was observed releasing steam and mist onto the cement flooring which then flowed into a wastewater drain.

AOC1- An oily substance was ponding around the base of and asphalt product tank.

Extensive staining at the storage treatment tanks (SWMU8)

Sludge spattering and an unknown deposit on the ground at the water treatment plant for boilers (SWMU22)

PA/VSI Recommendations

Soil sampling at SWMU8 (storage treatment tanks)- there was extensive staining, soil & groundwater sampling at SWMU19 (wastewater treatment plant), test deposit for caustic contamination (SWMU22), soil and groundwater sampling at AOC1 and AOC2.
Sampling was done in 1997, and several contaminants were above the regulatory limits.

CORRECTIVE ACTION STABILIZATION QUESTIONNAIRE

Completed by: Mary Wojciechowski
Date: March 19, 1992

Background Facility Information

Facility Name: Clark Oil and Refinery Corporation
EPA Identification No.: ILD 005 109 822
Location (City, State): Blue Island, Illinois
Facility Priority Rank: Low

1. Is this checklist being completed for one solid waste management unit (SWMU), several SWMUs, or the entire facility? Explain.

Entire facility - 22 SWMUs and 2 Areas of Concern

Status of Corrective Action Activities at the Facility

2. What is the current status of HSWA corrective action activities at the facility?

( ) No corrective action activities initiated (Go to 5)
(X) RCRA Facility Assessment (RFA) or equivalent completed
( ) RCRA Facility Investigation (RFI) underway
( ) RFI completed
( ) Corrective Measures Study (CMS) completed
( ) Corrective Measures Implementation (CMI) begun or completed
( ) Interim Measures begun or completed

3. If corrective action activities have been initiated, are they being carried out under a permit or an enforcement order?

( ) Operating permit
( ) Post-closure permit
( ) Enforcement order
(X) Other (Explain)

All past actions have appeared to be voluntary.

4. Have interim measures, if required or completed [see Question 2], been successful in preventing the further spread of contamination at the facility?

( ) Yes
( ) No
(X) Uncertain; still underway
( ) Not required

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

Facility Releases and Exposure Concerns

5. To what media have contaminant releases from the facility occurred or been suspected of occurring?

(X) Ground water
(X) Surface water
( ) Air
(X) Soils

6. Are contaminant releases migrating off-site?

( ) Yes; Indicate media, contaminant concentrations, and level of certainty.

Groundwater:
Surface water:
Air:
Soils:

( ) No
(X) Uncertain

7a. Are humans currently being exposed to contaminants released from the facility?

( ) Yes (Go to 8a)
( ) No
(X) Uncertain

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

7b. Is there a potential for human exposure to the contaminants released from the facility over the next 5 to 10 years?

( ) Yes
( ) No
(X) Uncertain

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

8a. Are environmental receptors currently being exposed to contaminants released from the facility?

( ) Yes (Go to 9)
( ) No
(X) Uncertain

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

8b. Is there a potential that environmental receptors could be exposed to the contaminants released from the facility over the next 5 to 10 years?

( ) Yes
( ) No
(X) Uncertain

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

Anticipated Final Corrective Measures

9. If already identified or planned, would final corrective measures be able to be implemented in time to adequately address any existing or short-term threat to human health and the environment?

( ) Yes
( ) No
(X) Uncertain

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

10. Could a stabilization initiative at this facility reduce the present or near-term (e.g., less than two years) risks to human health and the environment?

( ) Yes
( ) No
( ) Uncertain

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

11. If a stabilization activity were not begun, would the threat to human health and the environment significantly increase before final corrective measures could be implemented?

( ) Yes
( ) No
(X) Uncertain

Additional explanatory notes:

Further investigation is needed to determine the nature and extent of contamination at the facility.

Technical Ability to Implement Stabilization Activities

12. In what phase does the contaminant exist under ambient site conditions? Check all that apply.

(X) Solid
(X) Light non-aqueous phase liquids (LNAPLs)
( ) Dense non-aqueous phase liquids (DNAPLs)
(X) Dissolved in ground water or surface water
( ) Gaseous
( ) Other _____

13. Which of the following major chemical groupings are of concern at the facility?

(X) Volatile organic compounds (VOCs) and/or semi-volatiles
( ) Polynuclear aromatics (PAHs)
( ) Pesticides
( ) Polychlorinated biphenyls (PCBs) and/or dioxins
( ) Other organics
(X) Inorganics and metals
( ) Explosives
( ) Other _____

14. Are appropriate stabilization technologies available to prevent the further spread of contamination, based on contaminant characteristics and the facility's environmental setting? [See Attachment A for a listing of potential stabilization technologies.]

( ) Yes; Indicate possible course of action.

(X) No; Indicate why stabilization technologies are not appropriate; then go to Question 18.

Further investigation is needed to determine the nature and extent of contamination at the facility.

15. Has the RFI, or another environmental investigation, provided the site characterization and waste release data needed to design and implement a stabilization activity?

( ) Yes
( ) No

If No, can these data be obtained faster than the data needed to implement the final corrective measures?

( ) Yes
( ) No

Timing and Other Procedural Issues Associated with Stabilization

16. Can stabilization activities be implemented more quickly than the final corrective measures?

( ) Yes
( ) No
( ) Uncertain

Additional explanatory notes:

17. Can stabilization activities be incorporated into the final corrective measures at some point in the future?

( ) Yes
( ) No
( ) Uncertain

Additional explanatory notes:

Conclusion

18. Is this facility an appropriate candidate for stabilization activities?

( ) Yes
( ) No, not feasible
( ) No, not required
(X) Further investigation necessary

Explain final decision, using additional sheets if necessary.

There have been 3 documented releases of petroleum based materials to surface water in the past. They occurred in 1983, 1987, and 1990. The source of all 3 releases was corrected. Remediation was performed on the surface water body in 1983 and 1987.

There have been 7 documented releases of petroleum-based materials to on-site soils. These occurred in 1987, 1989, 1990, and 1991. Four of the 7 releases occurred in 1991. There is no record of remediation for the 1987 release. Soil sampling was reported to have occurred, but no further information is available. The 1989 releases were remediated (via removal and disposal of contaminated soil), but there is no evidence that sampling took place to confirm adequacy of remediation. The remaining 3 releases were observed during a VSI conducted in 1991. No further information is available on these releases.

There are 2 fuel product USTs that have never been leaked tested. Soil and ground water have not been sampled in the vicinity of the USTs.

At this time there is not enough information regarding the nature and extent of contamination at the facility to determine the need for stabilization activities.

Compliance File

CLARK OIL & REFINING CORPORATION

131ST AND KEDZIE AVENUE
POST OFFICE BOX 297
BLUE ISLAND, ILLINOIS 60406-0297
OFFICE: (708) 385-5000
FAX: (708) 385-0781

July 20, 1992

Mr. Kevin M. Pierard, Chief
United States Environmental Protection Agency
Minnesota/Ohio Technical Enforcement Section
RCRA Enforcement Branch
77 West Jackson Boulevard
Chicago, IL 60604-3590

Subject: Clark Oil & Refining Corporation
Blue Island Refinery
ILD 005 109 822
Preliminary Assessment/Visual Site Inspection

Dear Mr. Pierard:

Clark Oil & Refining Corporation (Clark) appreciates your letter and the attached copy of the Preliminary Assessment/Visual Inspection report. The Preliminary Assessment/Visual Site Inspection was performed at Clark's Blue Island Refinery, by Scott Tajak and Cynthia Tarka of Resources Application, Inc.

In the interest of accuracy Clark would like to correct certain areas of the report, that appear to be inconsistent with Clark's normal operations:

1. Page 11, 1st paragraph, line 7; ...Clark receives its potable water supply from Lake Michigan through the towns of Alsip and Blue Island. Clark receives it process water from the Cal Sag Channel....

2. Page 12, 1st paragraph, lines 10-22; ...The ~~oil is pumped~~ water is gravity fed to one of two in-ground API oil water separators. The oil wastewater is settled allowing for oil to float on top and the sludge to collect on the bottom. The oil is then pumped to ~~the~~

~~and~~ the API oil water separator are gravity fed or pumped into the DAF unit which saturates the wastewater with air bubbles causing the oil to float on the top of the unit. The oil is skimmed off and pumped back to ~~#60s~~ tank 63 or 65, Storage Treatment Tanks (SWMU 8). The water is drained into the Metropolitan Water Reclamation District Sewer System. The sludge (K051) material is vacuum pumped to ~~Tank #66~~ the overhead sludge tank ~~(SWMU 8)~~. Overflow pit sludge bottoms are also pumped to ~~Tank #66~~ the overhead sludge tank. ~~Tank #66 is a 5,000-barrel Sludge Tank (Clark, 1990).~~ Tanks #63 and #65 (SWMU 8) are oil water separator tanks that operate like Tank 59. Solids settle at the bottom with water lying directly above. The oils are piped back to the Refinery Process Area for reuse. The water is sent back to the overflow pit. The sludge ~~is pumped to Tank #66~~ pumped directly into tank trucks and sent for disposal at approved TSD Facilities.

3. Page 12, 2nd paragraph, line 2; ...This waste is pumped out of the unit and pumped into ~~Tank #66~~ Tank #63 or #65 (SWMU 8) where it settles with other types of sludge wastes....

4. Page 14, 1st paragraph, lines 1-3; The API separator units generate hazardous sludge (K051) that is also pumped to ~~Tank #66~~ overhead sludge tank, then pumped to

Tank #63 or #65 (SWMU 8) where it settles with other types of sludge. The sludge is pumped to ~~Tank #66~~ tank #63 or #65, or disposed of when the sludge inhibits the performance of the unit....

5. Page 14, 2nd paragraph, lines 2-4; ... ~~This waste is pumped to Tank #66 (SWMU 8) for storage.~~ This waste stream has been generated in varying quantities since 1968. ~~Tank #66 (SWMU 8) stores DAF float (K048), API separator sludge (K051), and the slop oil emulsion solid (K049).~~...

6. Page 14, 4th paragraph, line 1; Cooling tower basin sludges are generated from the cleaning of the ~~2~~ 4 cooling tower basins (SWMU 3)....

7. Page 14, 5th paragraph, lines 1-6; ~~Cooling tower basin sludge is also generated from the cleaning of cooling tower used for cooling the facility's boiler water.~~ Calumet Sag Channel water is pumped into the Water Treatment System (SWMU 22). This water is then treated with water softeners, heated to create steam by the boilers and utilized in heat exchangers and pipe tracing within the refinery. The process cooling water is used ~~once-through~~ as cooling waters in the refinery. The water is then pumped into ~~the~~ one of the four cooling tower units. Cooling tower basin sludge is generated. This waste is pumped into a Wastewater

Treatment System (SWMU 19) sewer. The wastewater is drained into the Metropolitan Water Reclamation District Sewer System.

8. Page 16, 6th paragraph, lines 3-8; ... The storm water ~~flows~~ is pumped into ~~API oil water separators~~ the waste water treatment system before discharged into the Metropolitan Water Reclamation District Sewer System. ~~If heavy rains occur, the storm water may intermix with the wastewater in Tank #59~~. Clark ~~is attempting to get~~ intends to apply for a NPDES permit for storm water drainage into the Calumet Sag Channel. Clark has cutoffs within its storm water pipeline that will allow the storm water to flow into the Channel during heavy downpours. ~~after the NPDES permit is approved~~.

9. Page 20, 1st paragraph, line 1; Clark also has 22 air permit and ~~for its~~ 2 Van Air Dryer units at ~~42~~ 2 different on-site locations....

10. Page 20, 4th paragraph, line 2-11; ...Three quarters of a mile ~~downstream~~ upstream from the site, Stoney Creek merges with the Calumet Sag Channel. Two miles further~~downstream~~ upstream, the Calumet Sag Channel merges with the Little Calumet River. Eight miles further ~~downstream~~ upstream, the Little Calumet River merges with the outlet from Lake Calumet to form the Calumet River, which in turn empties into Lake Michigan

6 miles beyond this junction....

11. Page 23, 4th paragraph, lines 5-6; ...The facility is bordered on the east by light industry and residences; on the west by heavy industry; on the ~~north~~ west by FSC Paper Company, ...

12. Page 30, 8th paragraph, lines 1-11; This unit consists of ~~6~~ gravel-covered dike field~~s~~ with six 5,100-barrel tanks (Photos 7 and 8). These tanks, ~~#61 through #66,~~ #63, #65, #66, are part of the ~~Wastewater Treatment Plant (SWMU 19)~~ Refinery's oil to rerun system. All skimmed oil and oily sludge are pumped to ~~the #60s tanks~~ tank #63 or #65 from the API separators, Tank 59, and the DAF unit for ~~further treatment and/or storage~~ preparation to be rerun in the process in which the material was generated. Tank #66 is a ~~sludge tank (Clark, 1990)~~ rerun storage tank for tansmix (pipeline interface returned from terminal operations. Tanks #63 and #65 (SWMU 8) are oil water separator tanks. Since each type of oil has a different specific gravity many different layers of oil are formed. solids settle at the bottom with water lying directly above. The oils are piped back to the Refinery Process Area for reuse. The water is sent back to the overflow pit and the cycle restarts. ~~The sludge is pumped to Tank #66~~....

13. Page 31, 4th paragraph, lines 1-2; ...A dike surrounds

~~each~~ the #60s Tanks....

14. Page 31, 6th paragraph, lines 1-4; ...The soil was stained extensively at the pipeline connection from Tank ~~#66~~ #65. This connection is used to vacuum pump sludge from Tank ~~#66~~ #65 into tanker trucks....

15. Page 38, 2nd paragraph, lines 15-; ...The ~~oil~~ water is ~~pumped~~ gravity fed to one of two in-ground API oil water separators. The oil wastewater is settled allowing for oil to float on top and the sludge to collect on the bottom. The oil is then pumped to ~~the #60s Storage Treatment Tanks~~ Tank #63 or #65 (SWMU 8) for further processing. The water from ~~both Tank #59 and~~ the API oil water separator (Photos 21 and 22) ~~are~~ is gravity fed or pumped into the DAF unit (Photo 23) which saturates the wastewater with air bubbles causing the oil to float on the top of the unit. The oil is skimmed off and pumped back to #60s Storage Treatment ~~tank~~ tank 63 or 65 (SWMU 8)....

8). The water is drained into the Metropolitan Water Reclamation District Sewer System. A discharge flow meter exists at this point (Photo 24). The sludge (K051) material is vacuum pumped to ~~Tank #66 (SWMU 8)~~ the overhead sludge tank. Overflow pit sludge bottoms are also pumped to ~~Tank #66~~ the overhead sludge tank. ~~Tank #66 is a 5,000-barrel Sludge Tank (Clark, 1990).~~

Tanks #63 and #65 (SWMU 8) are oil water separator tanks that operate like Tank 59. Since each type of oil has a different specific gravity, many different layer of oil are formed. Solids settle at the bottom with water lying directly above. The oils are piped back to the Refinery Process Area for reuse. The water is sent back to the overflow pit. The sludge ~~went to Tank #66~~ pumped directly into tank trucks and sent for disposal at approved TSD Facilities....

16. Page 39, 5th paragraph, line 1:...Tank #59 has a ~~earthen~~ coated steel floor....

17. Page 41, 1st & 2nd paragraphs;

SWMU 22 Water Treatment Plant ~~for Boilers~~

This unit consists of a water treatment system, ~~a~~ 5 boilers and ~~a~~ 4 cooling towers. The cooling towers ~~is~~ are 300-foot by 100-foot and ~~is~~ are used to cool heated ~~boiler~~ (the cooling towers do not cool boiler waters) process water (Photo 25). All ~~three~~ ten of these units are located near the north property boundary in the Refinery Process Area. Calumet Sag Channel water is pumped into the unit. The process cooling water is used ~~once-through~~ as cooling waters in the refinery. The water is then pumped into ~~the~~ one of the four cooling tower units. Cooling tower basin sludge is generated from this process. This sludge is pumped

into a Wastewater Treatment System (SWMU 19) sewer. The ~~once-through~~ boiler blow down and process cooling water blow down ~~is~~ are pumped into the Metropolitan Water Reclamation District Sewer System.

18. Page 42, 2nd paragraph; This unit consists of two 4,000-gallon underground metal bulk storage tanks (UST) for dispensing ~~regular (leaded) and~~ unleaded gasoline to company vehicles (Clark, 1990). These UST's are located in the Southwest Crude Tank Field. According to facility representatives, these UST's were installed in the early ~~1970's~~ 1980's. Since the UST's are approximately ~~20~~ 10 years old and there is no secondary containment, leakage of the product may be occurring. This area is an AOC because the aged UST's may be releasing gasoline product to the soil.

The above stated corrections are the most conspicuous inconsistences noted by Clark. Please do not consider this letter as a comprehensive comment on the Preliminary Assessment. Clark requests a copy of the corrected preliminary assessment so that additional corrections and comments can be submitted.

Thank you allowing Clark to response and for your time in reviewing this letter. If you have any questions, please do not hesitate to contact myself or Stafford Jacques.

Sincerely,

CLARK OIL & REFINING CORPORATION

Ronald Snook
Environmental Specialist

HRE-8J

JUN 3 0 1992

Mr. Ronald D. Snook
Environmental Specialist
Clark Oil & Refining Corporation
131st and Kedzie Avenue
P.O. Box 297
Blue Island, Illinois 60406-0297

Re: Clark Oil & Refining Corporation
ILD 005 109 822

Dear Mr. Snook:

Per your request of October 7, 1991, enclosed please find a copy of the Preliminary Assessment/Visual Site Inspection for the referenced facility.

The executive summary and conclusions and recommendations section have been withheld as enforcement confidential.

If you have any questions, please contact me at (312) 886-4448.

Sincerely yours,

ORIGINAL SIGNED BY
KEVIN M. PIERARD

Kevin M. Pierard, Chief
Minnesota/Ohio Technical Enforcement Section
RCRA Enforcement Branch

Enclosure

HRE-8J:FHARRIS:6-2884:6/29/92:MASTER.RES/LIST2

OFFICIAL FILE COPY

CONCURRENCE REQUESTED FROM REB			
OTHER STAFF	REB STAFF	REB SECTION CHIEF	REB BRANCH CHIEF
	FH 6/30/92	SA for KP 6/30/92	

U.S. Environmental Protection Agency
Office of Waste Programs Enforcement
Contract No. 68-W9-0006

TES 9

Technical Enforcement Support at Hazardous Waste Sites Zone III Regions 5,6, and 7

prc
PRC Environmental Management, Inc.

PRC Environmental Management, Inc.
233 North Michigan Avenue
Suite 1621
Chicago, IL 60601
312-856-8700
Fax 312-938-0118

PRELIMINARY ASSESSMENT/ VISUAL SITE INSPECTION

CLARK OIL & REFINING CORPORATION
BLUE ISLAND, IL
ILD 005 109 822

FINAL REPORT

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Waste Programs Enforcement
Washington, DC 20460

Work Assignment No.	:	R05032
EPA Region	:	5
Site No.	:	ILD 005 109 822
Date Prepared	:	June 8, 1992
Contract No.	:	68-W9-0006
PRC No.	:	109-R05032-IL02
Prepared by	:	Resource Applications, Inc.
Principal Investigator	:	Scott R. Tajak
Telephone	:	(312) 332-2230
Contractor Project Manager	:	Shin Ahn
Telephone No.	:	(312) 856-8700
EPA Work Assignment Manager	:	Kevin Pierard
Telephone No.	:	(312) 886-4448

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EXECUTIVE SUMMARY

Resource Applications, Inc. (RAI) performed a preliminary assessment and visual site inspection (PA/VSI) to identify and assess the existence and likelihood of releases from solid waste management units (SWMU) and other areas of concern (AOC) at the Clark Oil & Refining Corporation (Clark) facility in Blue Island, IL. This report summarizes the results of the PA/VSI and evaluates the potential for releases of hazardous wastes or hazardous constituents from SWMUs and AOCs identified.

Clark receives sweet crude oil via pipeline, refines it, and produces many petroleum-related products such as gasoline, liquefied petroleum gas (LPG), fuel oil #2, fuel oil #6, asphalt, propane, and butane. The facility covers 160 acres and has been in operation since the 1920s. In 1943 Emery Clark bought the refinery. Emery Clark sold the property to Apex Corporation in 1981. In 1988 Apex attempted to avoid bankruptcy by selling the refinery to the Horsham Corporation. Both Apex and Horsham Corporation maintained the "Clark" name for the Blue Island facility. Clark is regulated as a generator and treatment/storage/disposal interim status facility, but is working toward removing all its hazardous waste within 90 days of generation.

The facility consists of three parcels of land: 1) the Refinery Process Area; 2) the Southwest Crude Oil Tank Field and Barge Loading Area; and, 3) the Northwest Crude Oil Tank Field. In 1985, Clark sold its chemical plant to BTL Industries. Clark still owns a very small parcel of land within this BTL Industries property. Between the Northwest Tank Field and BTL Industries is a parcel of land owned by a different division of Clark. The property is referred to as the Clark Blue Island Terminal. This property used to be part of the refinery. All property previously owned by Clark was included in this PA/VSI.

The primary wastes generated at Clark are dissolved air floatation (DAF) float, slop oil emulsion solids, heat exchanger cleaning sludge, American Petroleum Institute (API) separator sludge, catalyst fines, cooling tower basin sludges, and scrap sulfur and wastewater. The facility is surrounded by a 6-foot chain link fence topped with barbed wire. All entrances to the facility are locked or guarded at all times. The nearest residences are within a mile in all directions from the facility. The nearest school is approximately a 1/2 mile to the northeast of the facility. The Calumet Sag Channel of the Little Calumet River forms the south boundary of the Southwest Crude Tank Field. A forest preserve used primarily for recreation is located less than two miles to the southeast of the facility. There are no wetlands, no habitats of endangered species, and no other sensitive environments within 2 miles of the site.

The PA/VSI identified the following 22 SWMUs and 2 AOCs at the facility:

Solid Waste Management Units

1. Outdoor Drum Storage Area
2. Sampled Product Waste Accumulation Areas
3. Cooling Tower Units
4. Bundle Cleaning Pad
5. Former Satellite Accumulation Storage Area
6. Former Storage Area
7. Satellite Accumulation Area
8. Storage Treatment Tanks
9. Former Container Storage Treatment Area
10. Former Container Storage Treatment Area
11. Former Container Storage Treatment Area
12. Former Storage Treatment Tank
13. Former Drum and Waste Storage Area
14. Former Container Storage Area
15. Former Container Storage Area
16. Former Waste Pile Area
17. Former Waste Piles and Impoundment Area
18. Former Impoundment Area
19. Wastewater Treatment System
20. Asbestos Satellite Accumulation Areas
21. Spent Catalyst Satellite Accumulation Areas
22. Water Treatment Systems for Boilers

Areas of Concern

1. Asphalt Tank
2. Underground Fuel Product Storage Tanks

At the Clark facility, there has been a release of an unknown type of petroleum product from Crude Tank #51 (AOC 1) onto the soil. Since no vertical secondary containment exists at this tank, ground water could possibly be contaminated also. A pipeline connection at the Storage Treatment Tanks (SWMU 8) shows evidence of past release to the soil via soil staining. This tank field also has no vertical secondary containment. Thus there is a moderate chance for ground water contamination also. Tank #51 (AOC 1), the Storage Treatment Tanks (SWMU 8), and Tank #59 (SWMU 19) all have no vertical secondary containment and are over 20 years old. RAI recommends that the soil and ground water be sampled for petroleum product contamination for all three areas.

Clark also has 2 underground fuel product storage tanks (AOC 2) built in the early 1970s. Due to the age of these units, there is a moderate chance of soil and/or ground water contamination. RAI recommends that both the soil and ground water be tested for petroleum contamination. The tanks should also be tested for integrity. Lastly, an unknown chemical deposit was spotted next to the cooling tower used by the Water Treatment System for Boilers (SWMU 22). This release, according to the facility representatives, is from the cooling tower unit. RAI recommends that this deposit be tested for caustic constituents. The potential for release to surface water is low since the facility has many diked areas that serve, as lateral secondary containment. The potential for a release to air is minimal except during a fire or explosion.

The potential for release to surface water is low since the facility has all tank farm areas diked. The process areas have wastewater and stormwater chains that could contain any lateral movement of release. Both types of drains lead into an on-site Wastewater Treatment System (SWMU 19).

The potential for a release to air is low if the units are kept closed or covered. The potential for volatility increases when the units are opened. The overflow pit and oil water separator units (SWMU 19) are exposed to air. These areas have high potential of release to air.

1.0 INTRODUCTION

PRC Environmental Management, Inc. (PRC) received Work Assignment No. C05087 from the U.S. Environmental Protection Agency (EPA) under Contract No. 68-W9-0006 (TES 9) to conduct preliminary assessments (PA) and visual site inspections (VSI) of hazardous waste treatment and storage facilities in Region 5. Resource Applications, Inc. (RAI), TES 9 Team member, provided the necessary assistance to complete the PA/VSI activities for Clark Oil and Refining Corporation (Clark).

As part of the EPA Region 5 Environmental Priorities Initiative, the RCRA and CERCLA programs are working together to identify and address RCRA facilities that have a high priority for corrective action using applicable RCRA and CERCLA authorities. The PA/VSI is the first step in the process of prioritizing facilities for corrective action. Through the PA/VSI process, enough information is obtained to characterize a facility's actual or potential releases to the environment from solid waste management units (SWMU) and areas of concern (AOC).

A SWMU is defined as any discernible unit at a RCRA facility in which solid wastes have been placed and from which hazardous constituents might migrate, regardless of whether the unit was intended to manage solid or hazardous waste.

The SWMU definition includes the following:

- RCRA-regulated units, such as container storage areas, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators, and underground injection wells
- Closed and abandoned units
- Recycling units, wastewater treatment units, and other units that EPA has generally exempted from standards applicable to hazardous waste management units
- Areas contaminated by routine and systematic releases of wastes or hazardous constituents. Such areas might include a wood preservative drippage area, a loading-unloading area, or an area where solvent used to wash large parts has continually dripped onto soils.

An AOC is defined as any area where a release to the environment of hazardous waste or constituents has occurred or is suspected to have occurred on a non-routine and nonsystematic basis. This includes any area where such a release in the future is judged to be a strong possibility.

The purpose of the PA is as follows:

- Identify SWMUs and AOCs at the facility.
- Obtain information on the operational history of the facility.
- Obtain information on releases from any units at the facility.
- Identify data gaps and other informational needs to be filled during the VSI.

The PA generally includes review of all relevant documents and files located at state offices and at the EPA Region 5 office in Chicago.

The purpose of the VSI is as follows:

- Identify SWMUs and AOCs not discovered during the PA.
- Identify releases not discovered during the PA.
- Provide a specific description of the environmental setting.
- Provide information on release pathways and the potential for releases to each medium.
- Confirm information obtained during the PA regarding operations, SWMUs, AOCs, and releases.

The VSI includes interviewing appropriate facility staff, inspecting the entire facility to identify all SWMUs and AOCs, photographing all SWMUs, identifying evidence of releases, initially identifying potential sampling locations, and obtaining all information necessary to complete the PA/VSI report.

This report documents the results of a PA/VSI of the Clark facility in Blue Island, IL.

The PA was completed on August 20, 1991. RAI gathered and reviewed information from the Illinois Environmental Protection Agency (IEPA) and from EPA Region 5 RCRA files. RAI also reviewed relevant publications from the United States Department of Agriculture (USDA), the United States Department of Commerce (USDC), the Federal Emergency Management Agency (FEMA), and the Illinois State Geological Survey (ISGS).

The VSI was conducted on August 21, 1991. It included interviews with Clark facility representatives and a walk-through inspection of the facility. Twenty-two SWMUs and 2 AOCs were identified at the facility. Field notes from the VSI are included in Attachment A. The VSI is summarized and 27 inspection photographs are included in Attachment B.

2.0 FACILITY DESCRIPTION

This section describes the facility's location, past and present operations (including waste management practices), waste generating processes, release history, regulatory history, environmental setting, and receptors.

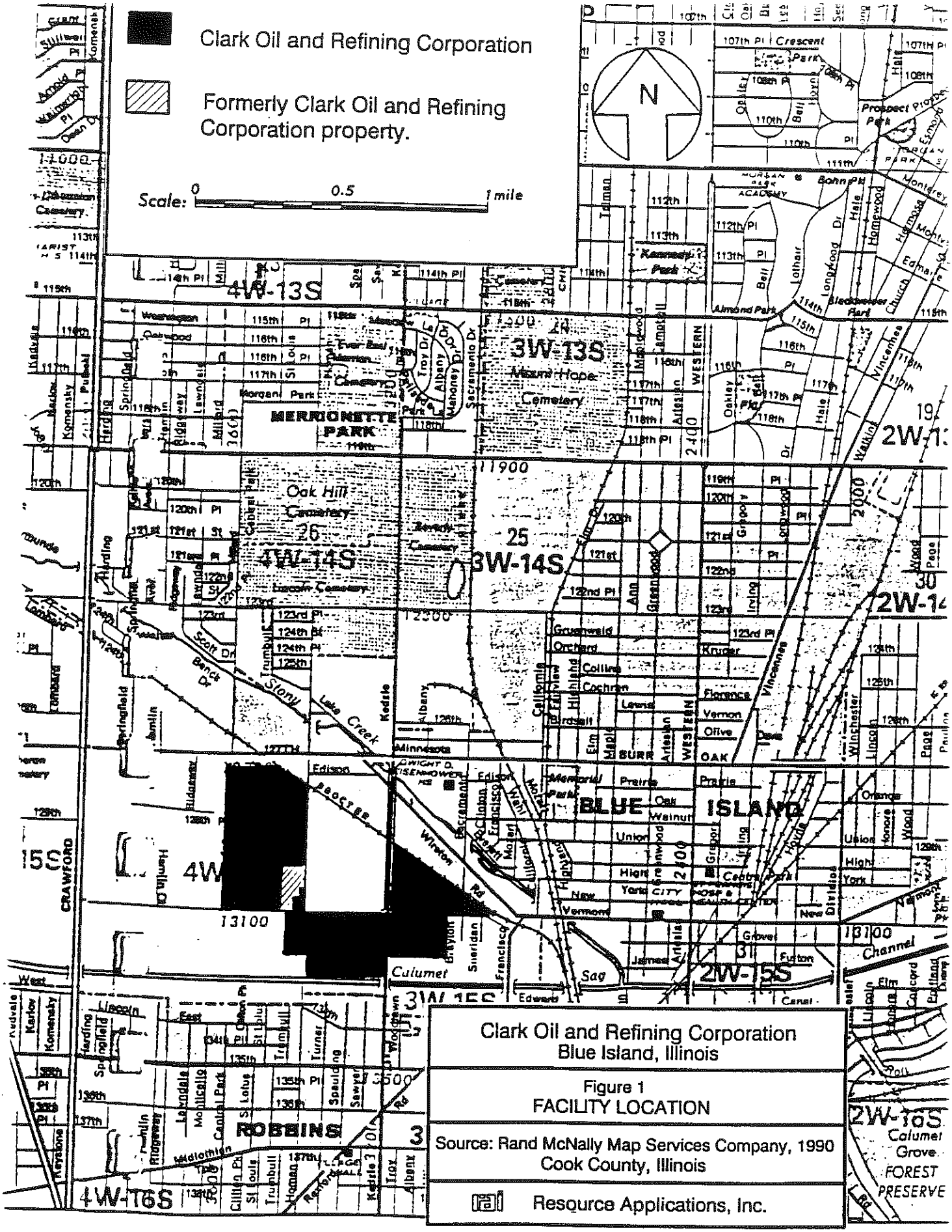
2.1 FACILITY LOCATION

The Clark facility is located at 131st and Kedzie Avenue in Blue Island, Illinois (Figure 1). The facility consists of three main parcels of land: 1) the Refinery Process Area to the northeast; 2) the Crude Oil Tank Field to the northwest; and, 3) a Crude Oil Tank Field and Barge Loading Area to the southwest. Clark previously owned a chemical plant situated next to the Northwest Crude Oil Tank Field. Clark sold this plant to BTL Industries in 1985. Clark also owns the land between the northwest Crude Tank Field and BTL Industries. Currently, it is owned by another division of Clark. This plot of land is referred to as the Clark's Blue Island Terminal. The facility covers 160 acres in three jurisdictions: Alsip, Blue Island, and unincorporated Cook County. The facility is approximately 22 miles southwest of downtown Chicago, at latitude 41° 39' 19" north and longitude 87° 42' 07" west (Clark, 1980b). The facility is situated within a mixed industrial and residential area.

2.2 FACILITY OPERATIONS

Great Lakes Refinery began operations in the mid-1920s. In 1943 it was sold to Emery Clark. In 1981 Emery Clark sold the refinery to Apex Corporation. Apex Corporation sold the refinery to Horsham Corporation in order to forestall bankruptcy in 1988 (Clark, 1991f). Both the Apex Corporation and Horsham Corporation maintained the "Clark" name. Clark employs three shifts of workers totalling about 280 people. The facility operates 24 hours a day, 7 days a week, 365 days a year.

Clark receives sweet crude oil via underground pipelines. The oil is diverted to several process areas where it is refined into different petroleum products such as gasoline, liquefied petroleum gas (LPG), fuel oil #2, fuel oil #6, asphalt, propane, and butane. Clark's Interim Status Hazardous Waste Part A Permit allows storage of hazardous waste for greater than 90 days (Clark, 1980b). However, current company policy allows only for less than 90-day storage of hazardous waste. All other wastes are stored on-site until there are sufficient quantities to make transport and disposal economical. The rate of generation for each waste depends on the quantity and type of product being produced. Facility SWMUs are listed in Table 1 and in Figures 2, 3, and 4. Facility AOCs are listed in Figure 3.



Clark Oil and Refining Corporation
Blue Island, Illinois

Figure 1
FACILITY LOCATION

Source: Rand McNally Map Services Company, 1990
Cook County, Illinois

Resource Applications, Inc.

TABLE 1

SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
1	Outdoor Drum Storage Area	No	Active
2	Sampled Product Waste Accumulation Areas	No	Active
3	Cooling Tower Units	No	Active
4	Bundle Cleaning Pad	No	Active
5	Former Satellite Accumulation Area	Yes	Inactive
6	Former Storage Area	Yes	Inactive
7	Satellite Accumulation Area	No	Inactive
8	Storage Treatment Tanks	No	Active
9	Former Container Storage Treatment Area	No	Inactive
10	Former Container Storage Treatment Area	No	Inactive
11	Former Container Storage Treatment Area	No	Inactive
12	Former Storage Treatment Tank	No	Inactive
13	Former Drum and Waste Storage Area	No	Inactive
14	Former Container Storage Area	No	Inactive

Note:

* A RCRA hazardous waste management unit is one that currently requires, or formerly required a RCRA Part A or Part B permit.

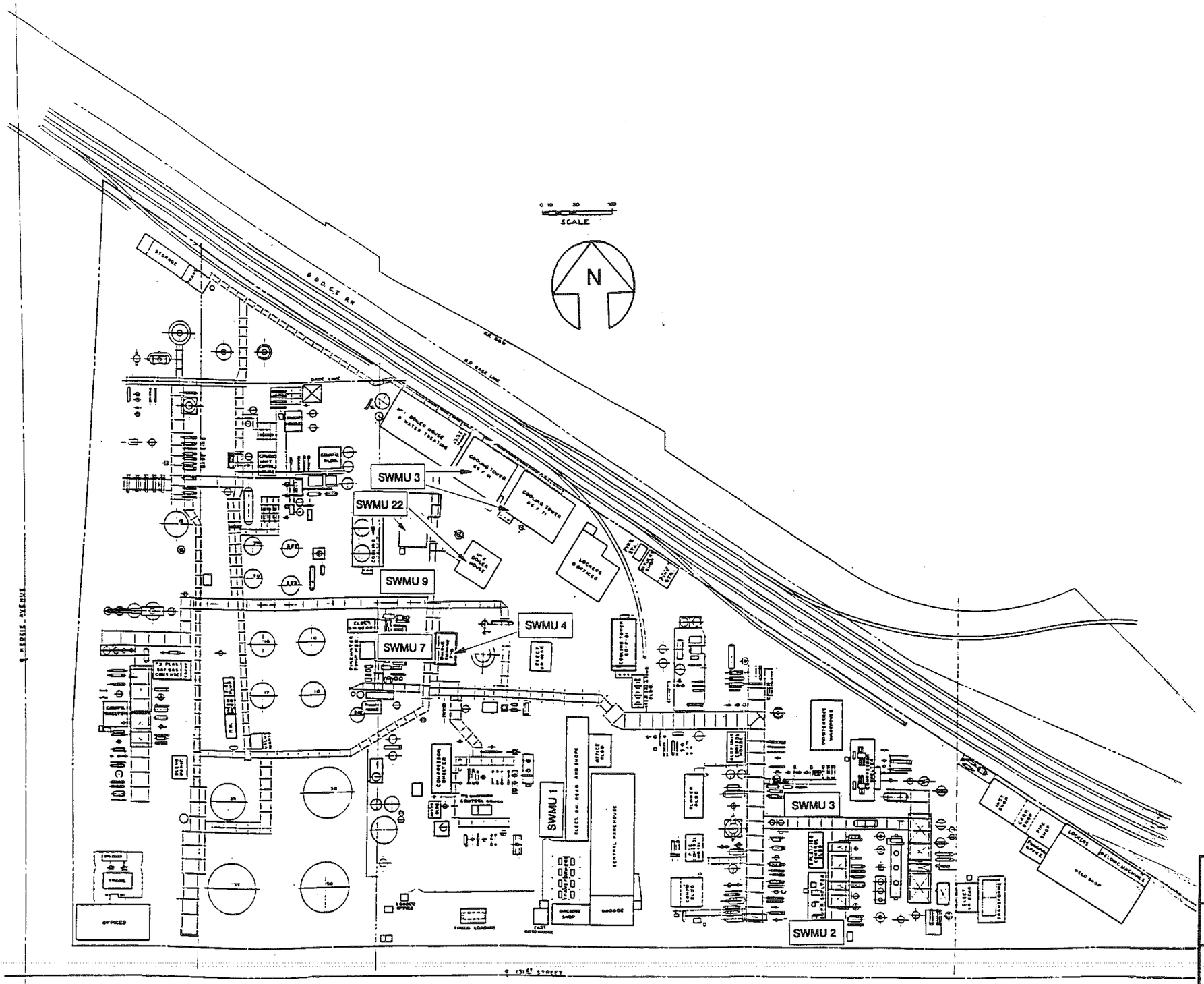
TABLE 1 (continued)

SOLID WASTE MANAGEMENT UNITS (SWMU)

SWMU Number	SWMU Name	RCRA Hazardous Waste Management Unit*	Status
15	Former Container Storage Area	No	Inactive
16	Former Waste Pile Area	No	Inactive
17	Former Waste Piles and Impoundment Area	No	Inactive
18	Former Impoundment Area	No	Inactive
19	Wastewater Treatment System	No	Active
20	Asbestos Satellite Accumulation Areas	No	Inactive
21	Spent Catalyst Satellite Accumulation Areas	No	Active
22	Water Treatment Plant for Boilers	No	Active

Note:

* A RCRA hazardous waste management unit is one that currently requires, or formerly required a RCRA Part A or Part B permit.



Clark Oil and Refining Corporation
Blue Island, Illinois

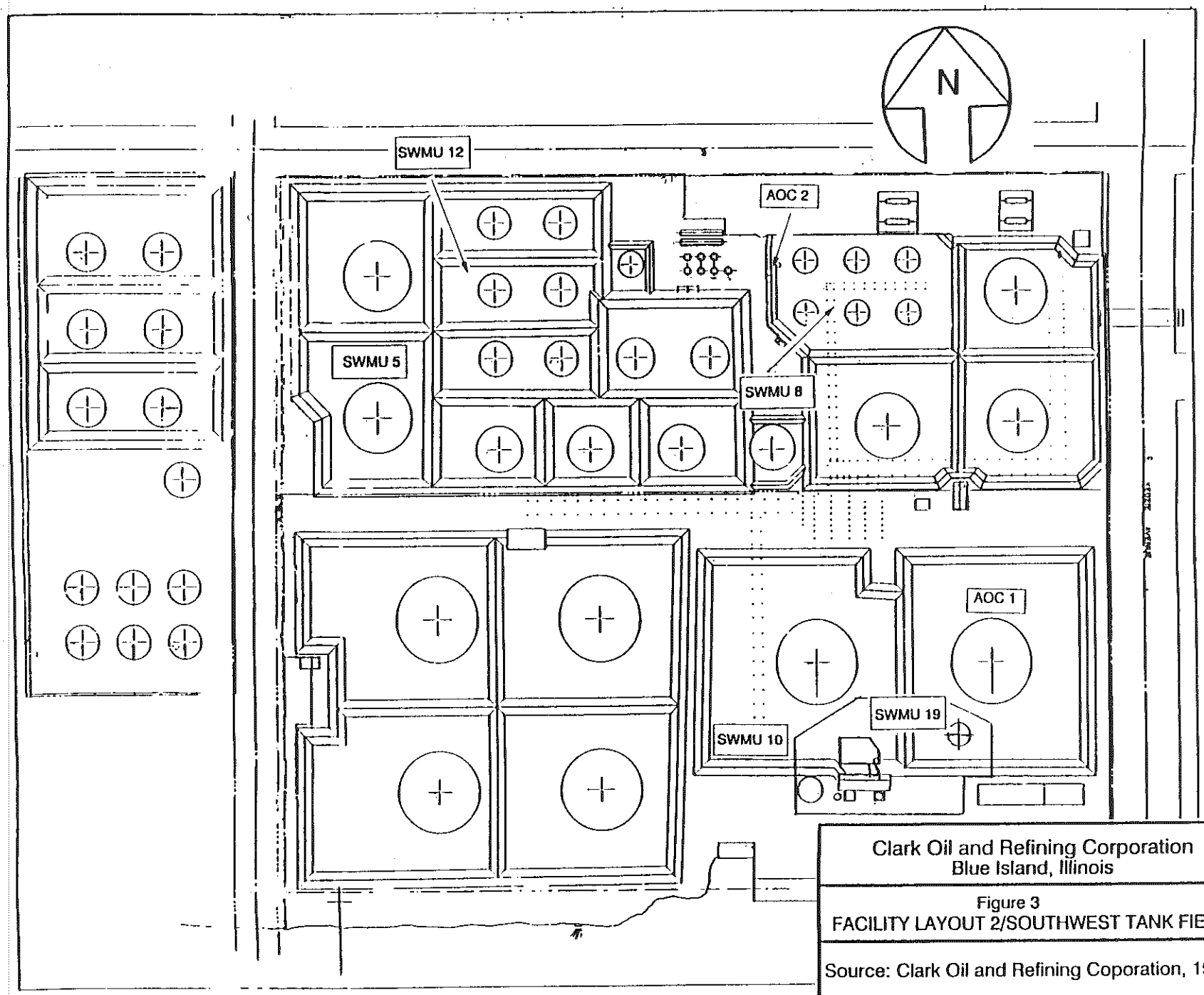
Figure 2
FACILITY LAYOUT 1/REFINERY PROCESS AREA

Source: Clark Oil and Refining Coporation, 1987

Resource Applications, Inc.

* SWMU 20 are units located throughout the facility.

** SWMU 21 are units located throughout the Refinery Process Area.



Clark Oil and Refining Corporation
Blue Island, Illinois

Figure 3
FACILITY LAYOUT 2/SOUTHWEST TANK FIELD

Source: Clark Oil and Refining Coporation, 1969

Resource Applications, Inc.

* SWMU 20 are units located throughout the facility.

Station

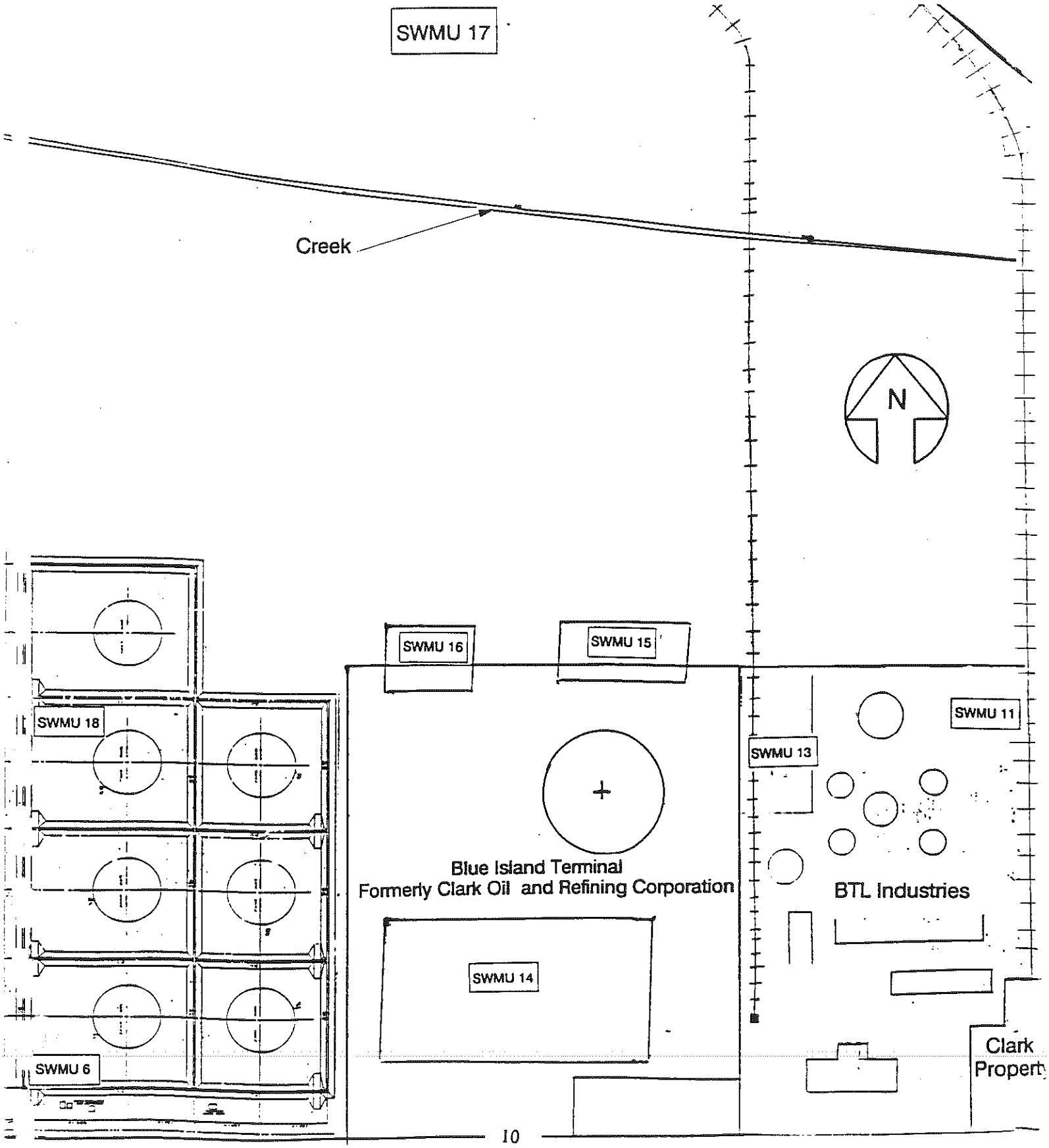
* SWMU 20 are units located throughout the facility.

Clark Oil and Refining Corporation
Blue Island, Illinois

Figure 4
FACILITY LAYOUT 3/NORTHWEST TANK FIELD

Source: Clark Oil and Refining Coporation, 1969a, 1980c, 1991b

Resource Applications, Inc.



Wastewater is generated in very large volumes at the Clark facility. The wastewater is treated in Clark's Wastewater Treatment System (SWMU 19). This system recovers most of the oily residue from the wastewater. The oily residues are re-entered into the Refinery Process. This Wastewater Treatment System (SWMU 19) has generated dissolved air flotation (DAF) float (K048), American Petroleum Institute (API) separator sludge (K051), and slop oil emulsion solids (K049) since 1968. These waste streams are used for off-site fuel blending. All specific source waste streams at Clark are RCRA-listed hazardous wastes due to the possibility of high levels of cadmium and lead. The Clark facility receives its water supply from Lake Michigan through the towns of Alsip and Blue Island. The Clark facility also has a Water Treatment System for Boilers (SWMU 22). This unit generates non-hazardous sludge and wastewater.

Clark generates bundle cleaning sludge (K050) from heat exchanger cleaning on the Bundle Cleaning Pad (SWMU 4) and basin sludge from the Cooling Tower Units (SWMU 3). The sludges produced from cleaning are power-washed into the Wastewater Treatment System (SWMU 19). Scrap sulfur is also generated during the maintenance and servicing of the desulfurization unit within the Refining Process Area and stored in a Satellite Accumulation Area (SWMU 7). PCB-contaminated oil is generated in small quantities during transformer servicing and is stored in the Outdoor Drum Storage Area (SWMU 1). Spent 1,1,1-trichloroethane (TCA) is generated from the part cleaning dip tank. This waste is also stored in the Outdoor Drum Storage Area (SWMU 1). Safety-Kleen removes the TCA for reprocessing. Asbestos waste is engendered when pipe insulation is removed. This waste is placed in roll-off boxes at the locations (SWMU 20) of the asbestos abatement. Sulfur catalyst, sand, clay, and oily wastes are generated from the cleanup of spilled petroleum product.

Various spent catalysts are generated during the production of gasoline. The waste is placed in drums at various locations (SWMU 21) within the Refinery Process Area. When enough of this waste is collected, it is taken to an outside firm. This firm reprocesses it and gives it back to Clark.

In Clark's Interim Status Hazardous Waste Part A Permit Application, a facility map was provided showing various SWMUs. Most of these SWMUs are currently unidentifiable. The facility representatives claimed that these units did not exist. The representatives also stated no records existed "that they knew of" (Clark, 1991b).

2.3 WASTE GENERATING PROCESSES

Most of the wastes generated at the Clark facility are from the Wastewater Treatment System (SWMU 19) (Table 2). All of the refining processes release wastewater. This wastewater enters the Wastewater Treatment System (SWMU 19) through a vast pipeline system. Steel drains connect to the system throughout the whole facility. Eleven electric sump pumps pump the wastewater to the Wastewater Treatment Area in the Southwest Crude Tank Field (Clark, 1990). Some of this wastewater is treated in an alkylation neutralization pit before being pumped to the Wastewater Treatment Area. After it reaches the Wastewater Treatment Area, it is pumped into the aboveground steel 5,100-barrel Tank #59. If the quantity of wastewater is greater than the volume that Tank #59 can hold, the wastewater overflows into a 72,000-gallon pit (Clark, 1991d). This pit is made of concrete and is pitched to one side. As the wastewater settles in Tank #59, the oil floats to the top. The oil is pumped to one of two in-ground API oil water separators. The oil wastewater is settled allowing for oil to float on top and the sludge to collect on the bottom. The oil is then pumped to the #60s Storage Treatment Tanks (SWMU 8) for further processing. The water from both Tank #59 and the API oil water separator are pumped into the DAF unit which saturates the wastewater with air bubbles causing the oil to float to the top of the unit. The oil is skimmed off and pumped back to #60s Storage Treatment Tanks (SWMU 8). The water is drained into the Metropolitan Water Reclamation District Sewer System. The sludge (K051) material is vacuum pumped to Tank #66 (SWMU 8). Overflow pit sludge bottoms are also vacuum pumped to Tank #66. Tank #66 is a 5,100-barrel Sludge Tank (Clark, 1990). Tanks #63 and #65 (SWMU 8) are oil water separator tanks that operate like Tank #59. Since each type of oil has a different specific gravity many different layers of oil are formed. Solids settle at the bottom with water lying directly above. The oils are piped back to the Refinery Process Area for reuse. The water is sent back to the overflow pit. The sludge is pumped to Tank #66. All wastewater treatment sludges are RCRA listed wastes because of possible high levels of chromium and lead constituents. These sludges are removed off-site and used for fuel blending.

The Wastewater Treatment System (SWMU 19) generates several types of hazardous sludge waste. The DAF unit generates float (K048). This waste is pumped out of the unit and pumped into Tank #66 (SWMU 8) where it settles with other types of sludge waste. This waste stream has been produced since 1968 and is generated in varying quantities depending upon the level of production in a given year.

TABLE 2

SOLID WASTES

Waste/EPA Waste Code	Source	Primary Management Unit
Dissolved Air Flotation Float/ K048	Wastewater Treatment System	SWMU 19, 8
API Separator Sludge/K051	Wastewater Treatment System	SWMU 19, 8
Slop Oil Emulsion Solids/K049	Wastewater Treatment System	SWMU 19, 8
Heat Exchanger Bundle Cleaning Sludge/K050	Heat Exchanger Bundle Cleaning	SWMU 4, 19
Cooling Tower Basin Sludges	Cooling Tower Basin Cleaning	SWMU 3, 19, 22
Scrap Sulfur	Sulfur Pit and Vessel Cleaning	SWMU 7
Leaded Tank Bottoms/K052	Storage Tank Cleaning	SWMU 5, 6
Spent 1,1,1-trichloroethane/ F001	Parts Cleaning Process	SWMU 1
Oil Product Drippage	Product Sampling Process	SWMU 2
Asbestos	Pipe Insulation Removal	SWMU 20
Scrap Resin	Chemical Plant	SWMU 13
PCB-contaminated Oil	Transformer Servicing	SWMU 1
Spent Catalysts	Gasoline Production	SWMU 21

The API separator units generate hazardous sludge (K051) that is also pumped to Tank #66 (SWMU 8) where it settles with other types of sludge. The sludge is pumped to Tank #66 when the sludge inhibits the performance of the unit. Before 1989, this sludge was pumped directly into tanker trucks and shipped off-site for fuel blending.

Slop oil emulsion solids (K049) are generated from the oil interface from Tanks #63 and #65 (SWMU 8). This waste is pumped to Tank #66 (SWMU 8) for storage. This waste stream has been generated in varying quantities since 1968. Tank #66 (SWMU 8) stores DAF float (K048), API separator sludge (K051), and the slop oil emulsion solids (K049). In 1990, approximately 324,240 gallons of these three sludges were generated at the facility. This combined sludge waste is pumped into tanker trucks provided by American Waste Haulers of Maywood, Illinois and taken to Environmental Waste Resources of Coal City, Illinois for fuel blending (Clark, 1991a) within 90 days of generation.

Heat exchanger bundle cleaning sludge (K050) is generated during the cleaning of heat exchangers. Heat exchangers are a series of bundled metal tubes that have water flowing through them. Half of these tubes have heated water in them and half have cool water in them. The hot tubes warm the cool tubes so that certain refinery processes could recycle the heat displaced in the water. Sometimes dirt, debris, and sludge clog the tubes. When this occurs, the refinery disassembles the heat exchangers and places them on the Bundle Cleaning Pad (SWMU 4). Then the sludge in the tubes is drilled or power sprayed out. The sludge and wastewater are drained into a trench beneath the pad. This trench leads into the Wastewater Treatment System (SWMU 19). This cleaning process has occurred once every three or four years since the mid-1970s.

Cooling tower basin sludges are generated from the cleaning of the 2 process cooling tower basins (SWMU 3). These units are used to cool heated process water. Before 1988 the towers had to be shut down in order for the units to be cleaned. The sludges were pumped into tanker trucks and sent to a landfill for disposal. Since 1988 the basin sludges are power washed into the drains that lead into the Wastewater Treatment System (SWMU 19).

Cooling tower basin sludge is also generated from the cleaning of the cooling tower used for cooling the facility's boiler water. Calumet Sag Channel water is pumped into the Water Treatment System (SWMU 22). This water is then treated with water softeners. The water is used as once-through cooling water. The water is pumped into the cooling tower unit. Cooling tower basin sludge is generated. This waste is pumped into a Wastewater Treatment System (SWMU 19) sewer. The wastewater is drained into the Metropolitan Water Reclamation District Sewer System.

Scrap sulfur has been generated from the cleaning of the Sulfur Pits and Vessels (SWMU 7) since 1976 when the desulfurization process area was built. When a sulfur pit or vessel is shut down for cleaning or maintenance, the molten sulfur is pumped directly into tanker trucks and sold as product. The unpumpable sulfur is allowed to cool. Jackhammers are used to crack the hardened sulfur. The sulfur rock is removed and placed into 55-gallon steel drums. This waste is then shipped off-site by flatbed truck to a landfill for disposal. This waste is generated only once every four or five years or when the unit is shut down for maintenance.

Leaded tank bottoms (K052) were occasionally removed in the past during tank cleaning. This waste was generated during the storage of leaded gasoline. These leaded tank bottoms were pumped or shoveled into plastic lined roll-off boxes. Currently, Clark no longer produces leaded gasoline. In 1981, 20 cubic yards of leaded tank bottoms were removed from Crude Tank #46 (Clark, 1981). This waste was shoveled into a lined roll-off box within the diked area (SWMU 5) outside Tank #46. This roll-off boy unit was moved to the Northwest Tank Field in the diked area (SWMU 6) surrounding Crude Tank #801. This waste was transported by General Drainage of Gary, Indiana to Waste Management of Illinois' CID landfill in Calumet City, Illinois (Clark, 1981). In 1988, Clark generated 12,120 gallons of leaded tank bottoms (Clark, 1989). The last shipments of this waste were transported in 1988 by Independent Waste of Gary, Indiana to CID Landfill for land disposal (Clark, 1989).

Spent 1,1,1-trichloroethane (TCA) (F001) is generated from the part cleaning dip tank. Before 1990 this degreaser never became a waste. It was used for cleaning pipes and pumps throughout the facility. Most of the spent TCA evaporated into the air during this cleaning. Since, 1990 year or so spent TCA is no longer used for cleaning pumps and pipes. Hence the spent TCA is vacuum pumped into steel 55-gallon drums and placed on plastic pallets in the Outdoor Drum Storage Area (SWMU 1). Clark generated 855 gallons of spent TCA in 1990 (Clark, 1991a, 1991b). This waste was picked up by Safety-Kleen for incineration/reprocessing.

Occasionally sampling of product is performed to test for quality. The samples are tested on-site. The samples cannot be considered waste after testing, since the samples are deposited directly into the Crude Unit for reuse. The Crude Unit is the location where incoming crude oil is diverted to all refining processes. However, 30-gallon barrels stored in SWMU 2 are used below the sampling spigots in case drippage or overflows occur during sample can filling. This overflow material is waste. The barrels are emptied into the one of the Wastewater Treatment System's sumps, which pump wastewater to the oil water separators (SWMU 19).

Asbestos is generated infrequently when pipe insulation is replaced. This removal process occurs throughout the facility. Each location of asbestos removal and accumulation is a SWMU. These numerous locations will be referred to as Asbestos Satellite Accumulation Areas (SWMU 20). When there is asbestos waste, it is wrapped in plastic and placed into a roll-off box. This waste is then sent to a landfill for disposal.

Scrap resin was generated before 1985 at Clark's Chemical Plant now owned by BTL Industries. This scrap resin was placed into 55-gallon steel drums and stored in a Drum and Waste Storage Area (SWMU 13), also currently located in BTL Industries. This waste was transported by BFI to ESL of Joliet for landfilling (Clark, 1991d).

Polychlorinated Biphenyl (PCB) contaminated oil is generated in small quantities. Every other year Clark hires an outside contractor to service its transformers. Sometimes servicing requires the removal of the dielectric which may contain PCB oil. This waste is removed by the contractor to an unknown location (Clark, 1991c).

Sulfur catalyst, sand, clay, and oil wastes are generated from the cleanup of spilled asphalt, oil, etc. This waste stream is generated only when a spill occurs. The rate of generation for this waste stream depends upon the size and type of spill. This waste is stored near the spill site in a roll-off boxes when needed. This nonhazardous waste is shipped to a landfill when economically feasible.

Various spent catalysts are generated during the production of gasoline. The rate of generation depends upon the rate of gasoline production. These catalyst fines are placed into 55-gallon steel drums at several Spent Catalyst Satellite Accumulation Areas (SWMU 21) throughout the Refinery Process Area. This material is shipped off-site when economically feasible for recycling and/or recovery of the catalyst. The recovered catalyst is sent back to Clark for reuse.

Storm water drains are present throughout the Clark facility. These drains lead into a pipeline separate from the wastewater pipeline. The storm water pipeline system flows to the Wastewater Treatment Area in the southwest crude tank field (SWMU 19). The storm water flows into the API oil water separators before discharging into the Metropolitan Water Reclamation District Sewer System. If heavy rains occur, the storm water may intermix with the wastewater in Tank #59. Clark is attempting to get a NPDES permit for storm water drainage into the Calumet Sag Channel. Clark has cutoffs within its storm water pipeline that will allow the storm water to flow into the Channel during heavy downpours after the NPDES permit is approved.

2.4 RELEASE HISTORY

On January 18, 1973 an unexpected flash rainstorm of high intensity caused water in a 6-foot diameter waste and storm water sewer to overflow an oil retention baffle and discharge an estimated maximum of 50 gallons of retained oil into the Calumet Sag Channel (Clark, 1991b). Retention booms were used to entrap the oil after which it was skimmed from the water surface. To prevent a reoccurrence, Clark installed a permanent surface skimmer, complete with a pump, that enables the operator to readily accomplish removal of surface oil from behind the baffle during periods of higher than normal flows (Clark, 1990).

At a 1987 IEPA site inspection, benzene was observed coming out of the ground at BTL Industries (IEPA, 1988). Clark sold BTL Industries its Chemical Plant in 1985. Soil samples were taken but RAI was unable to obtain copies of the analytical results. Also in June of 1987, a 6 mile long oil sheen was observed by a Metropolitan Water Reclamation (MWRD) District helicopter on the Calumet Sag Channel originating from Clark (IEPA, 1987a, 1987b). Clark boomed the discharge off. The discharge was from a pipe that should not have had a connection with crude pipelines. No further information was made available to RAI about this incident.

In 1989 leakage of oil product from Tank #52 contaminated the soil. The spill was pumped into the wastewater system. The contaminated soil was removed to CID Landfill for land disposal. Clark also cleaned and/or replaced all contaminated sewer drains (Clark, 1991c). In 1989 a fire occurred on a gas tank flange. Clark's own fire team put out the fire (Clark, 1991c).

On May 14, 1990 a 6-inch flange gasket on Tank #804 (a 119,300-barrel tank) in the Northwest Crude Tank Field broke spilling "gas-oil" into the Tank #804 dike (Clark, 1990). This material normally would be contained in the dike. Each dike within the #800 and terminal tank farms has a drain and a control valve which is left closed. The valves are manually opened to drain rainwater. Rainwater is drained to the Alsip storm sewer located on the west side of the #800 tank farm. The Alsip sewer flows north and discharges into Mosquito Creek. Mosquito Creek in the past flowed east, but currently it flows west. The problem arose when the control valve on the Tank #804 dike did not function properly. On or about May 14, 1990 the 6-inch flange was repaired. During this time it was not known that the #804 dike control valve was malfunctioning. The contaminated soil was removed on or about May 17, 1990 and properly disposed (Clark, 1990). On May 23, 1990, the malfunctioning control valve was found and recorded. It was repaired on May 25, 1990. Gas-oil has a very high viscosity, once it drains it sets up as a solid. On June 8, 1990 after a period of rain, the #800 tank farm discharged its collected rainwater and

the warm temperature was enough to liquefy the gas-oil. The gas-oil then flowed into the Alsip storm sewer and subsequently in to Mosquito Creek. To prevent reoccurrences, Clark checks all control valves on a routine basis to assure proper operation and control valves are checked after any uncontrolled spill (Clark, 1990).

On May 5, 1991, Tank #38 overflowed. Asphalt poured onto the ground and hardened. Sand was placed on the spill to absorb some of the asphalt's oily nature. Clark remediated the ground by removing 200 cubic yards of contaminated soil. This waste was placed in a plastic lined roll-off box and taken to CID Landfill for disposal (Clark, 1991c).

During the VSI on August 21, 1991, three releases to the environment were noted. First, in the Desulfurization Plant Area (Refining Process Area), sulfur powder product was observed on the on-site soil. In the HF Alkylation Plant Area, a condensate knockoff tank was observed releasing steam and mist onto the cement flooring. This water then flowed into a wastewater drain within 5 feet of the unit. This release is not a normal event. A pump normally pushes the condensate into the Wastewater Treatment Plant (SWMU 19). This pump failed, thus triggering the manually controlled release. Also noted was ponding of an oily substance around the base of Tank #51. This tank stores asphalt product.

2.5 REGULATORY HISTORY

Clark filed its Permit Application for Treatment Works and Wastewater Sources on October 24, 1972 (Clark, 1972). Clark applied for a renewal of its operating permit in 1974. IEPA notified Clark on October 31, 1974 that Clark's renewal application was an incomplete submission. IEPA requested Clark to add specific information about its cyanide concentrations in its wastewater effluent (Clark, 1974). Clark filed a Notification of Hazardous Waste Activity designating the facility status as a generator and treatment/storage/disposal firm (Clark, 1980a). Their Part A permit application was filed on November 17, 1980 stating that 700 tons of K048 waste; 2,600 tons of K049 waste; 1 ton of K050 waste; 1,200 tons of K051 waste; 200 tons of K052 waste; 30 tons of D001 waste; 74 tons of D002 waste, and 791 tons of D003 waste were generated per year (S01, S02, T01, T02, T04) (Clark, 1980b). EPA verified Clark's Hazardous Waste activity on September 28, 1981 (EPA, 1981).

Included with Clark's Part A permit application were facility drawings indicating six container storage units, waste pile and surface impoundment units, and tank storage and treatment units. During the VSI, Clark claimed that these units never existed, as they had originally been identified by Clark on their Part Application and never removed in subsequent Part A applications. RAI considered them

SWMUs and proceeded to investigate the location these units were to have occupied. Very little informaiton was available regarding these units.

On August 2, 1983 Clark requested EPA for permission to modify its Part A application (Clark, 1983). Clark wanted to change its Interim Status to generator only. Clark claimed that it had never stored, treated, or disposed of hazardous wastes for greater than 90 days. EPA responded to this request on January 24, 1984. EPA notified Clark that its request to modify its Interim Status was not signed and certified by an authorized person. Also EPA reminded Clark that if a treatment/storage/disposal (TSD) unit was used for hazardous waste, that it must go through closure before the modification to status is approved (EPA, 1984a). Clark failed to reply to this response. On December 18, 1984 EPA requested that Clark review current regulations before requesting withdrawal of Part A - Interim status (EPA, 1984b). On January 10, 1985, Clark once again requested a withdrawal of its Part A Permit (Clark, 1985a). EPA responded to this second request for withdrawal on June 12, 1985. EPA again informed Clark that its request was not signed and certified by an authorized person. EPA reminded Clark that if any unit was previously used to treat/store/dispose any hazardous waste, the unit would have to go through closure (EPA, 1985b). For a third time Clark requested EPA for permission to modify its permit on July 24, 1985 (Clark, 1985b). Clark reemphasized its request on October 8, 1985. Clark restated that it only generates waste. Clark mentioned that a roll-off box of leaded tank bottoms (K052) was inadvertently stored on-site for longer than 90 days while awaiting disposal permit issuance from IEPA (Clark, 1985c). In a followup letter, Clark explained this issue further. Clark informed EPA that it had waited 64 days for a disposal permit to be issued by IEPA. Although the leaded tank bottoms are a listed (K048) waste, characteristic category testing found the waste nonhazardous. During conversations with facility representatives for this VSI, as of August 21, 1991 Clark is still a generator and TSD facility (Clark, 1991c).

Over the past nine years, IEPA has conducted several inspections of Clark's waste management practices. On March 24, 1982, an IEPA Interim Status Standards inspection was performed at the facility (IEPA, 1982). This inspection report is illegible. RAI was unable to obtain a good copy. On August 12, 1987 a RCRA inspection was performed to determine the Interim Status of this facility. No specific conclusions were drawn from the visit. No violations were cited, although a fuel tank was found leaking oil into a diked containment area (IEPA, 1987a). A RCRA Land Disposal Restriction Inspection was performed on November 16, 1989 (IEPA, 1989). Clark was found to be operating in compliance with Land Disposal Restriction regulations. On May 6, 1991 IEPA notified Clark that operator certification records indicated that Clark's Wastewater Treatment System was not being operated by a properly certified operator. IEPA requested Clark to respond within 30 days of its plan to alleviate this noncompliance (IEPA, 1991a).

Clark also has 22 air permits for its Van Air Dryer units at 42 different on-site locations (Clark, 1991g, IEPA, 1991b). These units dry fuel gas lines before emitting steam to the air. These units do not generate waste.

All of Clark's wastewater discharge and surface waater runoff is directed to the Metropolitan Water Reclamation District Sewer System. Clark has no NPDES permit.

2.6 ENVIRONMENTAL SETTING

This section describes the climate, flood plain and surface water, geology and soils, and ground water in the vicinity of the Clark facility.

2.6.1 Climate

The Clark site is located at 131st and Kedzie Avenue in Blue Island, Illinois, a suburb southwest of Chicago. It is approximately 11 miles southeast of Midway Airport, the location of the nearest U.S. National Weather Service Office. With no significant topographical barriers to airmass flow, the climate in the area is typically continental with cold winters, warm summers, and frequent short-period fluctuations in temperature, humidity, cloudiness, and wind direction (Ruffner, 1985). The average annual daily temperature is 50.6°F, while the lowest average minimum temperature is 17.6°F occurs in January and the highest average monthly maximum temperature of 81.8°F occurs in July. The prevailing wind direction is from the west-southwest, and the average wind speed is 10 miles per hour. Average annual precipitation, as a water equivalent is 34.33 inches. Average annual net precipitation is 4.44 inches (USDC, 1968). In winter, about one-half of the precipitation (10 percent of the annual total) falls as snow. During the fall, winter, and spring, the pattern of precipitation tends to be more uniform both over time and distance, whereas in summer, rainfall is often locally heavy and variable. The 1-year, 24-hour maximum rainfall recorded in the area over a 34-year period is 6.24 inches (Ruffner and Bair, 1985).

2.6.2 Flood Plain and Surface Water

The facility is at an approximate elevation of 600 feet above mean sea level. The Calumet Sag Channel forms the south boundary of the Southwest Crude Tank Field. Three quarters of a mile downstream from the site, Stony Creek merges with the Calumet Sag Channel. Two miles further downstream, the Calumet Sag Channel merges with the Little Calumet River. Eight miles further downstream, the Little Calumet River merges with the outlet from Lake Calumet to form the Calumet

River, which in turn empties into Lake Michigan 6 miles beyond this junction. From the Calumet Sag Channel to the Little Calumet River's junction with the Calumet River, the riverbanks run a course of almost constant elevation. Beyond this junction the riverbanks run at an almost constant elevation but are bordered, up to one-half mile from either bank, by swamps, marshes, and poorly drained land (USGS, 1977). The site locale is classified as a Zone C flood plain area, that is, an area of minimal flooding outside the 500-year flood plain limit (FEMA, 1983).

2.6.3 Geology and Soils

Surface features in the Chicago area are largely the result of glaciation and almost completely cover the underlying bedrock surface (Willman, 1971). The facility is underlain by a soil complex known as the Urban land-Selma-Oakville. Urban land comprises 50 percent of this soil complex and consists of soils that have been cut, graded, and filled and that are obscured by buildings and pavements. The Selma soil series, comprising 20 percent of the soil complex, is characterized by deep, poorly drained moderately permeable soils on outwash and lake plains. They are formed in loamy, calcareous glacial outwash and have slopes ranging from 0 to 2 percent. Oakville soils make up 20 percent of the complex and consist of deep, well-drained, very rapidly permeable soils on sand ridges. These soils formed in lake-deposited beach ridges, and have slopes ranging from 2 to 7 percent. The remaining soils in this complex have a common quality of being drained (USDA, 1979).

Soils in the Chicago area have developed over the past 13,500 years through weathering of the immediately underlying glacial deposits left behind, for the most part, by retreating Wisconsin-age glaciers. In the vicinity of the site, these glacial deposits consist largely of silt and clay, with occasional lenses of sand and gravel reworked glacial deposits. Commingled with these deposits in the Lake Calumet region are areas of made-land -- former lake-bottom land reclaimed using rubbish as landfill material. Approximately 45 feet of glacial deposits/made-land overlie the uppermost bedrock unit of Silurian age. In the Chicago area, Silurian age formations are almost entirely dolomite, whose composition ranges from extremely argillaceous, silty, and cherty to exceptionally pure. In the site vicinity, it is about 450 feet thick. Beneath the Silurian dolomite are successively older rocks of Ordovician and Cambrian age. Within each of these two systems are distinctive sandstone formations which serve as major aquifer systems in the Chicago area. The base of the Cambrian is in contact with the crystalline pre-Cambrian basement at an inferred depth of 4,500 feet (Willman, 1971).

2.6.4 Ground Water

In northeastern Illinois, ground water is obtained from four major aquifer systems: the glacial drift system, the shallow bedrock system, and two deep bedrock systems. They are distinguished by their hydrologic properties and recharge source areas (Hughes, et al., 1966). In central Cook County, the glacial drift is thin, and sand and gravel deposits are correspondingly thin or absent. Here shallow deposits are mainly fine-grained or silty, and virtually all drilled wells penetrate solid bedrock for ground water supplies (Bergstrom, et al., 1955). The shallow bedrock aquifer system in the vicinity of site underlies the glacial drift system and comprises the Silurian dolomite formations and underlying late Ordovician shales. The upper boundary of this system is the top of the bedrock, and the lower boundary is the top of a sequence of formations of middle Ordovician age called the Galena-Platteville Dolomite. Water from this aquifer is obtained from fractures and solution openings in the Silurian dolomite beds. As a result, individual well yields vary widely, depending upon the water volume present in the drilled openings. Recharge is attained by percolation of local precipitation through the overlying glacial drift and/or permeable materials within the drift sequence itself (Hughes, et al., 1966). The shallow bedrock system can serve as a source for domestic, industrial, and municipal water supplies. Domestic wells usually obtain water from the upper 15 feet to 75 feet of the dolomite, while wells serving municipalities and industries generally penetrate 50 feet to 250 feet into the dolomite (Bergstrom, et al., 1955).

The deep bedrock aquifer systems include the Cambrian-Ordovician aquifer system and the Mt. Simon aquifer system. The former comprises the Glenwood and St. Peter Formations of the middle Ordovician series and the Ironton and Galesville Sandstone Formations of the late Cambrian. The top of the Cambrian-Ordovician aquifer is at the top of or within the Galena-Platteville Dolomite, which serves as the lower boundary for the shallow bedrock aquifer system. In the site locale, the contact between the Galena-Platteville Formations and the Glenwood Formation occurs at a depth of about 800 feet below the ground surface. The bottom of the Cambrian-Ordovician aquifer system is located in the impermeable shales and dolomites of the upper and middle parts of the Cambrian Eau Claire Formation, at a depth of about 1,400 feet below the ground surface. Thus, this aquifer system spans a thickness of 600 feet (Hughes, et al., 1966).

Within the Cambrian-Ordovician aquifer system, the Glenwood-St. Peter Sandstone unit is widely utilized as an aquifer where water requirements are less than 200 gallons per minute (gpm). This unit has a permeability of approximately 15 gallons per day per square foot (gpd/sq.ft). The Ironton-Galesville Sandstone unit is the major producing unit in the Cambrian-Ordovician aquifer because it has the most

consistent permeability (35gpd/sq.ft) and thickness (200 ft.) of the aquifers in northeastern Illinois (Hughes, et al., 1966).

Recharge to the Cambrian-Ordovician aquifer system is mostly from western McHenry, Kane and Kendall Counties where the rocks crop out at the surface or lie immediately below the glacial drift. Additional recharge occurs directly from leakage of precipitation downward through the shallow bedrock aquifer system.

The second deep bedrock aquifer system - the Mt. Simon aquifer - is situated on top by the relatively impermeable shales and dolomites of the upper and middle parts of the Eau Claire Formation. These units function as an aquitard and water in the Mt. Simon aquifer is about 1,750 feet beneath the ground surface. Although the Mt. Simon Sandstone is nearly 2,000 feet thick, only the uppermost 275 feet of sandstone yield potable water because, below that depth, the water is too highly mineralized for most purposes (Hughes, et al., 1966). The average permeability of the Mt. Simon aquifer system is approximately 16 gpd/sq. ft (Hughes, et al., 1966) and recharge is largely from the outcrop region of Cambrian rocks in central southern Wisconsin (Willman, 1971).

2.7 RECEPTORS

The Clark facility is located at the intersection of 131st and Kedzie Avenue is in a mixed industrial and residential area approximately 22 miles southwest of downtown Chicago, Illinois (Figure 1). This facility lies in three jurisdictions: Alsip, Blue Island, and unincorporated Cook County. The population of Alsip is 17,134 (Rand McNally, 1991). The population of Blue Island is 22,700 (McNally, 1991). The population of neighboring Chicago is approximately 2.8 million. The facility is bordered on the east by light industry and residences; on the west by heavy industry; on the north by FSC Paper Company, Century Oil Company, and a florist; and, on the south by the Calumet Sag Channel. The land on the southside of the Channel is owned by the Metropolitan Water Reclamation District. The proposed Robbins incinerator is suppose to be built there in the near future. BTL Industries, Clark Blue Island Terminal, and Martin Oil are situated between the Refinery Processing Area and the Northwest Crude Tank Field. Residential areas are a within a mile in all directions from the facility. The nearest school is a half-mile to the northeast of the facility.

The facility is surrounded by a 6-foot chain link fence topped with barbed wire. All entrances to the facility are locked or guarded at all times. The gates that are guarded, are so, 24 hours a day, 7 days a week.

Drinking water is supplied to the facility by the Towns of Alsip and Blue Island from Lake Michigan. There are no potable ground water wells within a two mile radius of the site (Clark, 1991f). The facility lies next to the Calumet Sag Channel. Mosquito Creek runs through the Northwest Crude Tank Field. Midway Airport is approximately 11 miles southwest of the facility. The Clark facility discharges all storm water and pretreated wastewater into the Metropolitan Water Reclamation District Sewer System.

A forest preserve used primarily for recreation is located within two miles to the southeast of the facility. There are no wetlands, no habitats of endangered species, and no other sensitive environments within two miles of the site.

3.0 SOLID WASTE MANAGEMENT UNITS

This section describes the 22 SWMUs identified during the PA/VSI. The following information is presented for each SWMU: description of the unit, dates of operation, wastes managed, release controls, history of release, and RAI observations.

SWMU 1	**Outdoor Drum Storage Area**
Unit Description:	This 6-foot by 18-foot storage area is used to store hazardous and special waste, as well as asphalt product in 55-gallon steel drums (Photo 1). The hazardous waste is stored for less than 90 days per current company policy. The unit is located within the Refinery Process Area.
Date of Startup:	1990.
Date of Closure:	This unit is currently active.
Wastes Managed:	1,1,1-trichloroethane (TCA)/F001, PCB-contaminated oil/special waste.
Release Controls:	This unit is located outdoors. The drummed wastes are on plastic 3-foot by 4-foot pallets on cement pavement.
History of Release:	No releases have been documented at this unit.
Observations:	Three drums of spent TCA (F001) and 1 drum of PCB-contaminated oil (special) was observed on a plastic pallet. Seven drums of asphalt product were also observed within the unit. The drums were sealed, labeled, and dated. There are some stains on the cement surface of the storage area. The drums appeared to be in sound condition.
SWMU 2	**Sampled Product Waste Accumulation Areas**
Unit Description:	These 3-foot by 3-foot areas are used to collect drippage and overflow product sampling fluids in 30-gallon steel drums (Photo 2). The waste is accumulated until the drums are full and/or within 90 days of generation

as per current company policy. Then the waste is poured into one of the Wastewater Treatment System sumps which pump it with other wastewater to the oil water separator Tank #59.

Date of Startup: Before 1964.

Date of Closure: These units are currently active.

Wastes Managed: Various liquid petroleum based products.

Release Controls: The drums rests on 3-foot by 3-foot circular metal pallets on cement flooring. These units are located outdoors.

History of Release: No releases have been documented at these units.

Observations: The concrete flooring has minor cracking. The barrels observed appeared to be in sound condition and were covered with lids. No evidence of release was noted.

SWMU 3 **Cooling Tower Units**

Unit Description: These 300-foot by 100-foot units are used to cool heated process water. They are located near the north property boundary in the Refinery Process Area. Water is allowed to fall 100 feet into a basin. This cools the heated water. Sometimes this water has particulate matter that falls and settles within the cooling tower basin. The sludge material that collects in the basin is currently power-washed into drains that lead into the Wastewater Treatment System (SWMU 19). Before 1988 the towers had to be shut down to remove sludge. The sludge was pumped into tanker trucks and sent to a landfill for disposal.

Date of Startup: Before 1964.

Date of Closure: These units are currently active.

Wastes Managed:	Cooling tower sludge, wastewater.
Release Controls:	These units are located outdoors. The cooling tower basins have a single unit concrete floor and berm. The berm is 1-foot high and 6-inches wide. These units have several wastewater drains.
History of Release:	No releases have been documented at these units.
Observations:	Two operating cooling towers were observed. Both seemed to be in sound condition. No evidence of release is noted.
SWMU 4	**Bundle Cleaning Pad**
Unit Description:	This 25-foot by 50-foot unit is used during heat exchanger bundle cleaning (Photo 3). Heat exchangers are a series of bundled metal tubes that have water flowing through them. Half of these tubes have heated water in them and half have cool water in them. The hot tubes warm the cool tubes so that certain refinery processes could recycle the heat displaced in the water. Sometimes dirt, debris and sludge clog the tubes. When this occurs, the refinery disassembles the heat exchanger and place the tubes on the Bundle Cleaning Pad. Then the sludge in the tubes is drilled or power-sprayed out. The sludge and wastewater are drained into a trench beneath the pad. This trench leads into the Wastewater Treatment System (SWMU 19). This unit is located in the Refinery Process Area, south of the cooling tower units.
Date of Startup:	Mid-1970s.
Date of Closure:	This unit is currently active.
Wastes Managed:	Heat exchanger bundle cleaning sludge/K050, wastewater.
Release Controls:	The unit has a concrete pad. The pad is pitched toward a wastewater sewer. The unit is bermed on three sides. The berm is 4 inches high and 3 inches wide.

History of Release:	No releases have been documented at this unit.
Observations:	The unit was observed to be in sound condition. One side of the concrete pad has no berm. Although this pad is pitched toward the wastewater sewer, a release of wastewater may have occurred along the side of the pad with no berm.
SWMU 5	**Former Satellite Accumulation Area**
Unit Description:	This former 10-foot by 40-foot unit was used for the accumulation and storage of hazardous tank bottom waste from Crude Tank #46 (Photo 4). Crude #46 Tank held leaded gasoline product. Clark no longer produces leaded gasoline. The waste was shoveled and pumped into a plastic lined roll-off box. This former unit was located in the Southwest Crude Tank Field.
Date of Startup:	1981.
Date of Closure:	This unit is inactive. The tank was moved to SWMU 6 in 1981. The waste was stored in both SWMU areas combined for greater than 90 days. Clark claims that both of these units do not need closure since IEPA was tardy in approving a disposal permit for the waste. EPA has not made a decision on this issue.
Wastes Managed:	Leaded tank bottoms/K052.
Release Controls:	This former unit was outdoors. The unit has a earthen floor. A dike surrounds Tank #46 and the former unit area. The gravel covered earthen dike is 5 feet high and has a secondary containment capacity of 75,200 barrels (Clark, 1990).
History of Release:	No releases have been documented at this unit.
Observations:	No evidence of this unit currently exists. Crude Tank #46 no longer stores leaded gasoline.

SWMU 6	**Former Storage Area**
Unit Description:	This former 10-foot by 40-foot unit was used for the storage of hazardous tank bottom waste from Crude Tank #46 (SWMU 5) (Photo 5). This former unit was located within the diked area of Crude Tank #801 in the Northwest Crude Tank Field.
Date of Startup:	1981.
Date of Closure:	This unit is inactive. The tank was removed in 1981. The waste was stored in both SWMU 5 and 6 combined for greater than 90 days. Clark claims that both of these units do not need closure since IEPA was tardy in approving a disposal permit for the waste. EPA has not made a decision on this issue.
Wastes Managed:	Leaded tank bottoms/K052.
Release Controls:	This former unit was outdoors. The unit has a earthen floor. A dike surrounds Tank #801 and the former unit area. The gravel covered earthen dike is 5 feet high and has a secondary containment capacity of 115,000 barrels (Clark, 1990).
History of Release:	No releases have been documented at this unit.
Observations:	No evidence of this unit currently exists.
SWMU 7	**Satellite Accumulation Area**
Unit Description:	This 3-foot by 3-foot area is used to accumulate and store waste sulfur in 55-gallon steel drums. This waste is generated from cleaning the sulfur pits and vessels associated with the desulfurization process (Photo 6). When a sulfur pit or vessel is shut down for cleaning or maintenance, the molten sulfur is pumped directly into tanker trucks and sold as product. The unpumpable sulfur is allowed to cool. Jackhammers are used to crack the hardened sulfur. The sulfur rock is removed and placed into

55-gallon steel drums. This waste is then shipped off-site by flatbed truck to a landfill for disposal.

Date of Startup: 1976.

Date of Closure: This unit is currently inactive. It is only active when the sulfur pits or vessels are being cleaned or serviced.

Wastes Managed: Sulfur scrap.

Release Controls: This unit is outdoors. The unit sits on gravel covered soil. No secondary containment exists.

History of Release: No releases have been documented at this unit.

Observations: The unit looked sound. Powdered sulfur product on the graveled covered soil was noted in two areas near the unit.

SWMU 8 **Storage Treatment Tanks**

Unit Description: This unit consists of 6 gravel-covered earthen diked fields with six 5,100-barrel tanks (Photos 7 and 8). These tanks, #61 through #66, are part of the Wastewater Treatment Plant (SWMU 19). All skimmed oil and oily sludges are pumped to the #60s tanks from the API separators, Tank #59 and the DAF unit for further treatment and/or storage. Tank #66 is a Sludge Tank (Clark, 1990). Tanks #63 and #65 (SWMU 8) are oil water separator tanks. Since each type of oil has a different specific gravity many different layers of oil are formed. Solids settle at the bottom with water lying directly above. The oils are piped back to the Refinery Process Area for reuse. The water is sent back to the overflow pit and the cycle restarts. The sludge is pumped to Tank #66. All Wastewater Treatment sludges are RCRA listed wastes because of possible high levels of chromium and lead constituents. These sludges are removed off-site within 90 days of generation and used for fuel blending.

Date of Startup:	1968.
Date of Closure:	These units are currently active.
Wastes Managed:	DAF float/K048, API separator sludge/K051, Slop oil emulsion solids/K049, waste oil, wastewater.
Release Controls:	These units are outdoors. The units have a earthen floor. A dike surrounds each #60s Tank. Each gravel-covered earthen dike is 5 feet high and has a secondary containment capacity of 37,500 barrels (Clark, 1990).
History of Release:	No releases have been documented for this unit.
Observations:	The treatment tanks appeared to be in sound condition. The soil was stained extensively at the pipeline connection from Tank #66 on the outside of the west dike. This connection is used to vacuum pump sludge from Tank #66 into tanker trucks. A 20-gallon sampling dip pan was sighted on the ground next to this connection filled with what appeared to be oily sludge. Empty sample cans were also observed.
SWMU 9	**Former Container Storage Treatment Area**
Unit Description:	In Clark's Hazardous Waste Part A Permit Application a map was provided showing that this unit was a container storage treatment area. (Photo 9) (Clark, 1980b). Facility representatives claim that this unit never existed. The unit is of unknown size.
Date of Startup:	Unknown.
Date of Closure:	This unit is currently inactive. The date that use was discontinued is unknown.
Wastes Managed:	Unknown.

Release Controls:	Unknown.
History of Release:	No releases have been documented at this former unit.
Observations:	No evidence of this unit exists. This unit is currently a gravel covered soil area.
SWMU 10	**Former Container Storage Treatment Area**
Unit Description:	In Clark's Hazardous Waste Part A Permit Application a map was provided showing that this unit was a container storage treatment area (Clark, 1980b). Facility representatives claim that this unit never existed. The former unit is of unknown size.
Date of Startup:	Unknown.
Date of Closure:	This unit is currently inactive. The date that use was discontinued is unknown.
Wastes Managed:	Unknown.
Release Controls:	Unknown.
History of Release:	No releases have been documented at this unit.
Observations:	No evidence of the former storage area exists. The unit is located in the current vicinity of the southern edge of Tank #52's diked area.
SWMU 11	**Former Container Storage Treatment Area**
Unit Description:	In Clark's Hazardous Waste Part A Permit Application a map was provided showing that this unit was a container storage treatment area (Clark, 1980b). Facility representatives claim that this unit never existed. The former unit is of unknown size.

Date of Startup:	Unknown.
Date of Closure:	This unit is currently inactive. The date that use was discontinued is unknown.
Wastes Managed:	Unknown.
Release Controls:	Unknown.
History of Release:	No releases have been documented at this unit.
Observations:	No evidence of this former storage area exists. This unit is located in the current vicinity of the northeastern corner of BTL Industries' Chemical Plant. RAI was unable to view this area since it was on BTL Industries property.
SWMU 12	**Former Storage Treatment Tank**
Unit Description:	In Clark's Hazardous Waste Part A Permit Application, a map was provided showing that this unit was a storage treatment tank (Clark, 1980b). Facility representatives claim that this unit never existed. The former unit is of unknown size.
Date of Startup:	Unknown.
Date of Closure:	This unit is currently inactive. The date that use was discontinued is unknown.
Wastes Managed:	Unknown.
Release Controls:	Unknown.
History of Release:	No releases have been documented at this unit.

Observations:	No evidence of the treatment tank exists. The approximate location of this former unit houses Tank #76, a 15,500-barrel gas blend tank in sound condition (Photo 10).
SWMU 13	**Former Drum and Waste Storage Area**
Unit Description:	In Clark's Hazardous Waste Part A Permit Application, a map was provided showing that this unit was a drum and waste storage area (Photo 11) (Clark, 1980b). Facility representatives claim that this unit never existed. The unit is of unknown size.
Date of Startup:	Unknown.
Date of Closure:	This unit is currently inactive. The date that use was discontinued is unknown.
Wastes Managed:	Unknown.
Release Controls:	Unknown.
History of Release:	No releases have been documented at this unit.
Observations:	No evidence of the former storage area exists. The approximate location of this former unit is in the northwest corner of BTL Industries' property. Currently, an empty gravel-covered soil area was observed through the fence between Clark Corporation's Blue Island Terminal and the BTL facility.
SWMU 14	**Former Container Storage Area**
Unit Description:	In Clark's Hazardous Waste Part A Permit Application, a map was provided showing that this unit was a container storage area (Photo 12) (Clark, 1980b). Facility representatives claim that this unit never existed. The unit is of unknown size.

Date of Startup:	Unknown.
Date of Closure:	This unit is currently inactive. The date that use was discontinued is unknown.
Wastes Managed:	Unknown.
Release Controls:	Unknown.
History of Release:	No releases have been documented at this former unit.
Observations:	No evidence of the former storage area exists. The approximate location of this former unit is under the control of Clark Blue Island Terminal.
SWMU 15	**Former Container Storage Area**
Unit Description:	In Clark's Hazardous Waste Part A Permit Application, a map was provided showing that this unit was a container storage area (Photo 13) (Clark, 1980b). Facility representatives claim that this unit never existed. The unit is of unknown size.
Date of Startup:	Unknown.
Date of Closure:	This unit is currently inactive. The date that use was discontinued is unknown.
Wastes Managed:	Unknown.
Release Controls:	Unknown.
History of Release:	No releases have been documented at this former unit.
Observations:	No evidence of this former storage area exists. The approximate location of this unit is at the northern property boundary of Clark Corporation's Blue Island Terminal. Currently, the location of the former storage area

houses former electrical connections for a former flare unit. This flare unit was moved into BTL Industries property when Clark sold the property.

SWMU 16 **Former Waste Pile Area**

Unit Description: In Clark's Hazardous Waste Part A Permit Application a map was provided showing that this unit was a past waste pile area (Photo 13) (Clark, 1980b). Facility representatives claim that this unit never existed. The unit is of unknown size.

Date of Startup: Unknown.

Date of Closure: This unit is currently inactive. The date that use was discontinued is unknown.

Wastes Managed: Unknown.

Release Controls: Unknown.

History of Release: No releases have been documented at this unit.

Observations: No evidence of the former storage areas exists. The approximate location of this former unit is at the northwestern corner of Clark Corporation's Blue Island Terminal property. Currently, the location of the former storage areas houses electrical connections for a former flare unit. This flare unit was moved into BTL Industries property when Clark sold the property.

SWMU 17 **Former Waste Piles and Impoundment Area**

Unit Description: In Clark's Hazardous Waste Part A Permit Application a map was provided showing that this unit was a past waste pile and impoundment area (Photo 14) (Clark, 1980b). Facility representatives claim that this unit was never an impoundment. The representative did state that the

unit was once used for construction waste piling. The size of the unit is approximately 3 acres.

Date of Startup: Unknown.

Date of Closure: This unit is currently inactive. The date that use was discontinued is unknown.

Wastes Managed: Unknown.

Release Controls: Unknown.

History of Release: No releases have been documented at this unit.

Observations: The approximate location of this former storage area is an empty field at the northern portion of land behind the Northwest Crude Tank Field. Some evidence of construction debris exists. There is no vegetation on this unit, although the area around this unit resembles a touch of prairie.

SWMU 18 **Former Impoundment Area**

Unit Description: In Clark's Hazardous Waste Part A Permit Application, a map was provided showing that this unit was a past impoundment area (Photo 15) (Clark, 1980b). Facility representatives claim that this unit was never an impoundment.

Date of Startup: Unknown.

Date of Closure: This unit is currently inactive. The begin date of inactivity is unknown.

Wastes Managed: Unknown.

Release Controls: Unknown.

History of Release: No releases have been documented at this former unit.

Observations: No evidence of this former unit exists. The approximate location of this former unit is at the northwestern corner of Tank #805's diked area in the Northwest Crude Tank Field.

SWMU 19 **Wastewater Treatment System**

Unit Description: Most of the wastes generated at the Clark facility are produced from the Wastewater Treatment System. All of the refining processes release wastewater. This wastewater enters the Wastewater Treatment System through dozens of drains (Photo 16). These steel drains lead to a vast pipeline system connected throughout the whole facility. Eleven electric sump pumps pump the wastewater to the Wastewater Treatment Area in the Southwest Crude Tank Field (Photo 17) (Clark, 1990). Some of this wastewater is treated in an alkylation neutralization pit before being pumped to the Wastewater Treatment Area (Photo 18). This pit is concrete lined. After it reaches the Wastewater Treatment Area, it is pumped into the above ground steel 5,100-barrel Tank #59 (Photo 19). If the volume of wastewater is greater than the volume that Tank #59 can hold, the wastewater overflows into a 72,000-gallon pit (Photo 20) (Clark, 1991d). This pit is made of concrete and is pitched to one side. As the wastewater settles in Tank #59, the oil floats to the top. The oil is pumped to one of two in-ground API oil water separators. The oil wastewater is settled allowing for oil to float on top and the sludge to collect on the bottom. The oil is then pumped to the #60s Storage Treatment Tanks (SWMU 8) for further processing. The water from both Tank #59 and the API oil water separator (Photos 21 and 22) are pumped into the DAF unit (Photo 23) which saturates the wastewater with air bubbles causing the oil to float to the top of the unit. The oil is skimmed off and pumped back to #60s Storage Treatment Tanks (SWMU 8). The water is drained into the Metropolitan Water Reclamation District Sewer System. A discharge flow meter exists at this point (Photo 24). The sludge (K051) material is vacuum pumped to Tank #66 (SWMU 8). Overflow pit sludge bottoms are also vacuum pumped to Tank #66. Tank #66 is a 5,100-barrel Sludge Tank (Clark, 1990). Tanks #63 and #65 (SWMU 8) are oil water separator tanks that operate

like Tank #59. Since each type of oil has a different specific gravity, many different layers of oil are formed. Solids settle at the bottom with water lying directly above. The oils are piped back to the Refinery Process Area for reuse. The water is sent back to the overflow pit. The sludge went to Tank #66. All Wastewater Treatment sludges are RCRA listed wastes because of possible high levels of chromium and lead constituents. These sludges are removed off-site and used for fuel blending.

Date of Startup: 1968.

Date of Closure: This unit is currently active.

Wastes Managed: DAF float/K048, API separator sludge/K051, Slop oil emulsion solids/K049, waste oil, wastewater.

Release Controls: The electric sumps are concrete walled. Tank #59 has a earthen floor. A dike surrounds it and Asphalt Tank #51. The dike is a gravel covered earthen 5-foot high dike with a secondary containment capacity of 85,000 barrels (Clark, 1990). The overflow pit, DAF unit, and the API separator pits are all concrete walled.

History of Release: No releases have been documented at this unit.

Observations: All tanks appeared sound and no signs of release were noted.

SWMU 20 **Asbestos Satellite Accumulation Areas**

Unit Description: These 10-foot by 40-foot areas accumulate and store asbestos waste from insulation removal processes. The material is wrapped in plastic before placement in a roll-off box. These units are site specific. When the abatement process is finished the unit will be permanently removed.

Date of Startup: 1978.

Date of Closure:	These units are currently inactive. This waste stream only occurs when insulation replacement is performed.
Wastes Managed:	Asbestos.
Release Controls:	The asbestos is plastic wrapped. The roll-off box is made of steel and is kept sealed when waste is not being added to it.
History of Release:	No releases have been documented from these inactive units.
Observations:	No evidence of these inactive units currently exists.
SWMU 21	**Spent Catalyst Satellite Accumulation Areas**
Unit Description:	These 3-foot by 3-foot areas accumulate and store spent catalyst fines in 55-gallon steel drums in various locations throughout the gasoline product process. These catalysts fines are sent off-site for reprocessing.
Date of Startup:	Before 1964.
Date of Closure:	This units are currently active.
Wastes Managed:	Spent catalyst fines.
Release Controls:	The units are situated on gravel-covered soil or cement pavement.
History of Release:	No releases have been documented at these units.
Observations:	One 55-gallon steel drum was observed in sound condition. No evidence of release were observed.

SWMU 22	**Water Treatment Plant for Boilers**
Unit Description:	This unit consists of a water treatment system, a boiler, and a cooling tower. The cooling tower unit is 300-foot by 100-foot and is used to cool heated boiler water (Photo 25). All three of these units are located near the north property boundary in the Refinery Process Area. Calumet Sag Channel water is pumped into the unit. This water is treated with water softeners. The water is used as once-through cooling waters. The water is then pumped into the cooling tower unit. Cooling tower basin sludge is generated from this process. This sludge is pumped into a Wastewater Treatment System (SWMU 19) sewer. The once-through cooling water is pumped into the Metropolitan Water Reclamation District Sewer System.
Date of Startup:	Before 1964.
Date of Closure:	These units are currently active.
Wastes Managed:	Cooling tower sludge, wastewater.
Release Controls:	These units are located outdoors. The cooling tower basin has a single unit concrete floor and berm. The berm is 1-foot high and 6-inches wide. These units have several wastewater drains.
History of Release:	No releases have been documented at these units.
Observations:	All units seemed to be in sound condition. The berm and cooling tower exterior wall showed signs of sludge splattering. Also noted was a unknown chemical deposit on the ground next to this cooling tower. The facility representative indicated that the deposit is caustic connected to the cooling tower process, although it lies beneath a sulfuric acid product tank.

4.0 AREAS OF CONCERN

RAI identified 2 AOCs during the PA/VSI. These are discussed below.

AOC 1 **Asphalt Tank**

During the VSI, ponding of an oily substance was observed at the base of Tank #51 (Photo 26). This unit is a 80,600-barrel asphalt product tank located in the Southwest Crude Tank Field. The Calumet Sag Channel forms Clark's southern boundary for this tank field. This unit has an earthen floor. A 5-foot gravel-covered earthen dike with a secondary containment capacity of 85,000 barrels surrounds this unit and Wastewater Storage Treatment Tank #59. This area is an AOC because contamination of soil was observed and no sampling or remediation has been conducted.

AOC 2 **Underground Fuel Product Storage Tanks**

This unit consists of two 4,000-gallon underground metal bulk storage tanks (UST) for dispensing regular (leaded) and unleaded gasoline to company vehicles (Clark, 1990). These USTs are located in the Southwest Crude Tank Field. According to facility representatives, these USTs were installed in the early 1970s. Since the USTs are approximately 20 years old and there is no secondary containment, leakage of the product may be occurring. This area is an AOC because the aged USTs may be releasing gasoline product to the soil.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The PA/VSI identified 22 SWMUs and 2 AOCs at the Clark facility. Background information on the facility's location, operations, waste generating processes, release history, regulatory history, environmental setting, and receptors is presented in Section 2.0. SWMU-specific information (such as the unit's description, dates of operation, wastes managed, release controls, release history, and observed condition) is discussed in Section 3.0. The AOCs are discussed in Section 4.0. Following are RAI's conclusions and recommendations for each SWMU and AOCs. Table 3 identifies the SWMUs and AOCs at the Clark facility and suggested further actions.

SWMU 1 **Outdoor Drum Storage Area**

Conclusions: This outdoor unit stores hazardous and special waste, as well as asphalt product in steel 55-gallon drums. The waste is stored for less than 90 days per current company policy. Three drums of TCA (F001) and 1 drum of PCB-contaminated oil (special) were observed in sound condition on a plastic pallet. Some stains were noted on the concrete floor. The threat of release via various pathway is summarized below.

Ground Water: Low. The barrels of waste are situated on a plastic pallet on cement pavement. A release can be contained before it has the opportunity to enter the ground water.

Surface Water: Low. A release can be contained before it has the opportunity to reach the nearest surface water (1/2 mile south).

Air: Low. Although TCA is a volatile chemical, the spent TCA is sealed in sound 55-gallon steel drums on a plastic pallet located on cement pavement. Thus the potential threat of release is low.

On-Site Soil: Low. The barrels of waste are situated on a plastic pallet on cement pavement. A release can be contained before it has the opportunity to enter the on-site soil.

Recommendations: No further action is recommended at this time.

TABLE 3

SWMU AND AOC SUMMARY

SWMU	Operational Dates	Evidence of Release	Recommended Further Action
1. Outdoor Drum Storage Area	1990 to present	Concrete Floor Stained	No further action at this time.
2. Sampled Product Waste Accumulation Storage Area	Before 1964 to present	None	No further action at this time.
3. Cooling Tower Units	Before 1964 to present	None	No further action at this time.
4. Bundle Cleaning Pad Storage Tank Area	Mid 1970s to Present	None	No further action at this time.
5. Former Satellite Accumulation Storage Area	1981	None	No further action at this time.
6. Former Satellite Storage Area	1981	None	No further action at this time.
7. Satellite Accumulation Storage Area	1976 to present	Powdered sulfur found on on-site soil	No further action at this time.
8. Storage Treatment Tanks	1968 to present	Soil Staining	Soil should be sampled for petroleum product contamination.
9. Former Container Storage Treatment Area	Unknown	Unknown	No action at this time, pending further information.
10. Former Container Storage Treatment Area	Unknown	Unknown	No action at this time, pending further information.
11. Former Container Storage Treatment Area	Unknown	Unknown	No action at this time, pending further information.
12. Former Storage Treatment Tank	Unknown	Unknown	No action at this time, pending further information.

TABLE 3 (continued)

SWMU AND AOC SUMMARY

SWMU	Operational Dates	Evidence of Release	Recommended Further Action
13. Former Drum and Waste Storage Area	Unknown	Unknown	No action at this time, pending further information.
14. Former Container Storage Area	Unknown	Unknown	No action at this time, pending further information.
15. Former Container Storage Area	Unknown	Unknown	No action at this time, pending further information.
16. Former Waste Pile Area	Unknown	Unknown	No action at this time, pending further information.
17. Former Waste Pile and Impoundment Area	Unknown	Unknown	No action at this time, pending further information.
18. Former Impoundment Area	Unknown	Unknown	No action at this time, pending further information.
19. Wastewater Treatment Plant	1968	None	Soil and ground water should be tested for petroleum contamination.
20. Asbestos Satellite Accumulation Storage Areas	1978	None	No further action at this time.
21. Spent Catalyst Satellite Accumulation Storage Areas	Before 1964	None	No further action at this time.
22. Water Treatment Plant for Boilers	Before 1964	Sludge splattering, unknown deposit on ground exterior to cooling tower basin	Deposit should be tested for caustic contamination

TABLE 3 (continued)

SWMU AND AOC SUMMARY

	AOC	Operational Dates	Evidence of Release	Recommended Further Action
1.	Asphalt Tank	About 1970	Oil contaminated soil	The soil and ground water should be sampled for petroleum contamination
2.	Fuel Product Under-Storage Tanks	About 1970	Possible fuel leakage	The soil and ground water should be sampled for petroleum contamination. The USTs should be tested for integrity.

SWMU 2 **Sampled Product Waste Accumulation Areas**

Conclusions: These outdoor units are used to collect drippage and overflow product sampling fluids in 35-gallon steel drums. The waste is stored for less than 90 days per current company policy. The drums are situated on circular metal pallets on cement flooring. The threat of release via various pathways is summarized below.

Ground Water: Low. The waste is in sound 35-gallon steel lidded drums on metal pallets situated on cement pavement. A release can be contained before it has the opportunity to enter the ground water.

Surface Water: Low. A release can be contained before it has the opportunity to reach the nearest surface water (1/2 mile south).

Air: Low. Although some of the petroleum product sample waste may be volatile, the drums are lidded. Thus, the potential release to air is low.

On-Site Soil: Low. Some very minor cracking in the cement pavement was noted. The waste itself is stored and accumulated in sound 35-gallon steel drums on metal pallets. The drums are lidded. Any release can be contained before it has the opportunity to enter the soil.

Recommendations: No further action is recommended at this time.

SWMU 3 **Cooling Tower Units**

Conclusions: These units cool heated process water. Nonhazardous sludge is generated. Before 1988 it was removed and disposed at a landfill. Currently it is power-washed into the wastewater sewer. The sludge collecting basins have a single unit concrete floor and berm. The units appeared to be in sound operating condition. The threat of release via various pathways is summarized below.

Ground Water: Low. The units have adequate secondary containment via the foot high berms and wastewater drains. A release can be contained before it has the opportunity to enter the ground water.

Surface Water: Low. A release can be contained before it has the opportunity to reach the surface water (3/4 miles south).

Air: Low. The non-volatile nature of the waste in this unit does not pose a threat of release to air.

On-Site Soil: Low. Any release can be contained via the foot high berms and wastewater sewers, before it has the opportunity to enter the soil.

Recommendations: No further action is recommended at this time.

SWMU 4 **Bundle Cleaning Pad**

Conclusions: This outdoor unit manages the cleaning of heat exchange bundles. The resulting sludge waste is K050 and RCRA listed for chromium and lead constituents. The concrete pad is pitched shallowly to a trench which leads to a wastewater chain. Both the sludge and wastewater are power-washed into the sewer. The pad is bermed on three sides. The threat of release via various pathways is summarized below.

Ground Water: Low. This unit is a concrete slab which is pitched toward a wastewater sewer and trench. Although the unit is only bermed on three sides. A release can be contained before it has the opportunity to enter the ground water, since the concrete slab is pitched away from the unbermed side.

Surface Water: Low. Any release can be contained before it has the opportunity to reach the nearest surface water (3/4 mile south).

Air: Low. The non-volatile nature of the waste in this unit does not pose a threat of release to air.

On-Site Soil: Low. Although the unit is only bermed on three sides the concrete pad is pitched toward a wastewater trench and wastewater sewer. Thus a release can be contained before it has the opportunity to enter the ground water.

Recommendations: No further action is recommended at this time.

SWMU 5 **Former Satellite Accumulation Area**

Conclusions: This unit was used for the accumulation and storage of hazardous leaded tank bottoms (K052) waste from Crude Tank #46. The waste was stored in a plastic lined roll-off box on an earthen floor within a diked area. The unit was moved to the dike area surrounding Crude Tank #801. The unit has not been formally closed. The threat of release via various pathways is summarized below.

Ground water: Low. The waste was stored in a plastic lined roll-off box on an earthen floor within a diked area. A release could have been contained before it had the opportunity to enter the ground water. Currently, the unit is empty and inactive; thus no threat exists.

Surface water: Low. A release could have been contained before it had the opportunity to reach the nearest surface water (1/4 mile north). Currently, no threat exists since the unit is inactive.

Air: Low. Due to the inert nature of the waste, the potential of release would have been low. Currently, no threat exists since the unit is inactive.

On-site soil: Low. Due to the inert nature of the waste, the potential of release would have been low. Currently, no threat exists since the unit is inactive.

Recommendations: No further action is recommended at this time.

SWMU 6 **Former Storage Area**

Conclusions: This unit was used for the storage of hazardous leaded tank bottoms (K052) waste from the Crude Tank #46. The waste was stored in a plastic lined roll-off box on an earthen floor within a diked area surrounding Crude Tank #801. The waste was removed in 1981. The unit has not formally been closed. The threat of release via various pathways is summarized below.

Ground water: Low. The waste was stored in a plastic-lined roll-off box on an earthen floor within a diked area. A release could have been contained before it had the opportunity to enter the ground water. Currently, the unit is empty and inactive; thus no threat exists.

Surface water: Low. A release could have been contained before it had the opportunity to reach the nearest surface water (1/2 mile south). Currently, no threat exists since the unit is inactive.

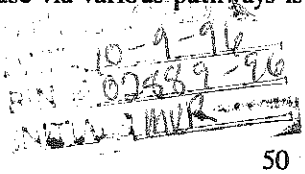
Air: Low. Due to the inert nature of the waste, the potential of release would have been low. Currently, no threat exists since the unit is inactive.

On-site soil: Low. Due to the inert nature of the waste, the potential of release would have been low. Currently, no threat exists since the unit is inactive.

Recommendations: No further action is recommended at this time.

SWMU 7 **Satellite Accumulation Area**

Conclusions: This unit accumulates and stores waste sulfur in 55-gallon steel drums. It is generated from cleaning sulfur pits and vessels associated with the desulfurization process. This unit is currently inactive. It is only activated when the sulfur pits or vessels are being cleaned or service. This unit is situated on gravel-covered soil. The unit appeared to be in sound condition. The threat of release via various pathways is summarized below.



Ground water: Low. Since the scrap sulfur is a solid and in an inert form, it poses no threat to the ground water.

Surface water: Low. Since the scrap sulfur is a solid and in an inert form, it poses no threat to the surface water.

Air: Low. Since the scrap sulfur is an inert form, it poses no threat to the air.
On-site soil: Low. Since the scrap sulfur is an inert form, it poses no threat to the on-site soil.

Recommendations: No further action is recommended at this time.

SWMU 8 **Storage Treatment Tanks**

Conclusions: This unit consists of 6 wastewater treatment storage tanks. Tanks #63 and #65 are oil water separator units. Tank #66 is a sludge storage tank which manages DAF float (K048), API separator sludge (K051), and slop oil emulsion solids (K049). These wastes are RCRA listed since all of them have a potential for high levels of chromium and lead. These six tanks are in sound condition. Each has an earthen floor and a 5-foot high earthen dike. The pipeline connection from Sludge Tank #66 to tanker trucks showed evidence of leakage onto the soil. Heavy soil staining was noted. A full sampling dip pan was also noted. These units were installed in the late 1960s. The threat of release via various pathways is summarized below.

Ground water: Moderate. Although the treatment tanks appear to be in sound condition, and have sound lateral secondary containment (earthen dikes), there is a moderate potential for ground water contamination. The floor of each diked area is earthen. Thus, the floor does not serve as secondary containment for vertical movement. If a release did occur, it would be prevented from spreading laterally but not necessarily vertically. Hence if the soil becomes saturated with large amounts of oil, it is moderately possible for the ground water also to be contaminated. The age of the tanks suggest that releases may have occurred in the past, although none have been documented.

Surface water: Low. A release can be contained by the earthen dikes before it has the opportunity to reach the nearest surface water (1/2 mile south).

Air: Low. The nature of the waste in this unit does not pose a threat of release to the air.

On-site soil: High. Due to the age of the tank field and the lack of adequate vertical secondary containment there is a high potential for release to on-site soil. On-site soil appears to be contaminated at the pipeline connection used for Tank #66 sludge removal.

Recommendations: RAI recommends that each tank field be sampled for petroleum product contamination in both the on-site soil and the underlying ground water. RAI also recommends that the soil near the pipeline connection be tested, and if a verification is made that the soil staining is a result of a petroleum release, remediate the area.

SWMU 9 **Former Container Storage Treatment Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location or history of release is known. Currently, the approximate location of the unit is an empty gravel-covered soil area near the Water Treatment System for Boilers (SWMU 22). The threat of release via various pathways is summarized below.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about waste managed, exact location, or history of release is known.

On-site soil: Unknown. No information about waste managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 10 **Former Container Storage Treatment Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location, or history of release is known. Currently, the approximate location of this unit is in the vicinity of the southern edge of Tank #52's diked area. The threat of release via various pathways is summarized below.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about waste managed, exact location, or history of release is known.

On-site soil: Unknown. No information about waste managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 11 **Former Container Storage Treatment Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location, or history of release is known. Currently, the approximate location of this unit is in the vicinity of the northeastern corner of BTL Industries' Chemical Plant.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about wastes managed, exact location, or history of release is known.

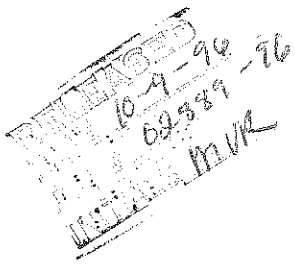
On-site soil: Unknown. No information about waste managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 12 **Former Storage Treatment Tank**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Applications facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location, or history of release is known. Currently, the approximate location of this unit houses Tank #76, a 15,500-barrel gas blend tank.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.



Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about waste managed, exact location, or history of release is known.

On-site soil: Unknown. No information about waste managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 13 **Former Drum and Waste Storage Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location, or history of release is known. Currently, the approximate location of this unit is in the vicinity of the southern edge of Tank #52's diked area. The threat of release via various pathways is summarized below.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about waste managed, exact location, or history of release is known.

On-site soil: Unknown. No information about waste managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 14 **Former Container Storage Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location, or history of release is known. Currently, the location of this unit is under Clark Corporation's Blue Island Terminal.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

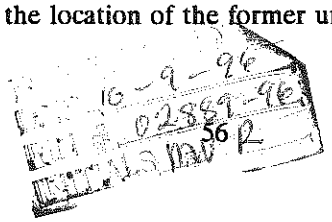
Air: Unknown. No information about waste managed, exact location, or history of release is known.

On-site soil: Unknown. No information about waste managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 15 **Former Container Storage Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location, or history of release is known. Currently, the location of the former unit houses former electrical connections for



a former flare at the northern property boundary of Clark Corporation's Blue Island Terminal.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about waste managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

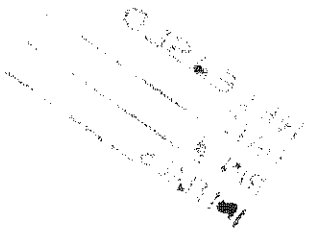
SWMU 16 **Former Waste Pile Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit never existed. No information about wastes managed, exact location, or history of release is known. Currently, the approximate location of the unit is at the northwestern corner of Clark Corporation's Blue Island Terminal property. This area currently houses former electrical connections for a former flare unit.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about wastes managed, exact location, or history of release is known.



Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 17 **Former Waste Piles and Impoundment Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit was never an impoundment. The representatives did state that this area was once used for construction waste piling. Currently, this former unit is an empty field without vegetation. Some evidence of construction debris exists. The vegetation is thriving outside the scope of this unit. The threat of release via various pathways is summarized below.

Ground water: Unknown. No information about wastes managed, exact location, or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about wastes managed, exact location, or history of release is known.

On-site soil: Unknown. No information about wastes managed, exact location, or history of release is known.

Recommendations: RAI recommends no further action at this time. If additional information regarding exact location, constituents managed, or potential release becomes available, testing may be indicated.

SWMU 18 **Former Impoundment Area**

Conclusions: This unit was shown in Clark's Hazardous Waste Part A Permit Application's facility map. Facility representatives claim that this unit was never an impoundment. The representatives did state that this area was used for

construction waste piling Currently, the approximate location of this unit is at the northwestern corner of Tank #805's diked area in the Northwest Crude Tank Field.

Ground water: Unknown. No information about wastes managed, exact location or history of release is known.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Unknown. No information about waste managed, exact location, or history of release is known.

On-site soil: Unknown.

Recommendations: No further action is recommended at this time.

SWMU 19 **Wastewater Treatment System**

Conclusions: This system treats all wastewater at the facility. The system includes hundreds of drains; a split storm water/wastewater pipeline system; an overflow pit; Tank #59, a oil water separator; a DAF unit, and an alkylation neutralization pit. All units appeared to be in sound condition. All sub-units of the Wastewater Treatment System have sound secondary containment except for Tank #59. Tank #59 has no vertical secondary containment since the field floor is earthen. Thus, any release to the field would result in soil contamination. The tank was installed in the late 1960's. All units in this system are situated from 1 block to 3/4 mile north of the Calumet Sag Channel. The threat of release via various pathways is summarized below.

Ground water: Moderate. The vertical secondary containment of Tank #59 is inadequate. A release to the soil would have a moderate potential to leach into the ground water for this reason. Also due to the age of the tank, past releases might have occurred or are currently occurring. All other units have adequate

secondary containment that would contain a release before it had an opportunity to enter ground water.

Surface water: Low to Moderate. Most units within the Wastewater Treatment System have adequate secondary containment except for Tank #59. Releases from these units can be contained before it has the opportunity to reach surface water (1 block to 3/4 miles south). Tank #59 has inadequate vertical secondary containment. Future releases will pollute the soil and ground water. Since Tank #59 is within 1 block of the channel, it is moderately possible that surface water may be come contaminated.

Air: Moderate to High. Both API separator and the Overflow pit are exposed to air. Vapor inhalation may have harmful effects to health. The waste are volatile in nature. Therefore the potential threat to air is moderate to high.

On-site soil: Low to High. All units except Tank #59 have adequate secondary containment that could prevent a release from reaching on-site soil. Therefore the potential threat to on-site soil is low. However Tank #59 has inadequate secondary containment. The potential threat to on-site soil is high since soil contamination occurs instantly after a release.

Recommendations: RAI recommends soil and ground water sampling be performed around Tank #59 to determine if releases have occurred in the past or are presently occurring as a result of age of the tank and lack of secondary containment.

SWMU 20 **Asbestos Satellite Accumulation Areas**

Conclusions: These units accumulate and store asbestos waste in steel roll-off boxes at various locations throughout the facility during pipe insulation removal and replacement. These units are currently inactive. These units are only activated when pipeline insulation replacement process are instigated. The threat of release via various pathways is summarized below.

Ground water: Low. The nature of the waste in these units does not pose a threat of release to ground water.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Moderate. Asbestos fibers are carcinogenic. When asbestos insulation is removed, there is a moderate potential for release of fibers into the air. This waste is then plastic wrapped before placement into the roll-off box.

On-site soil: Low. The nature of the waste in these units does not pose a threat of release soil.

Recommendations: No further action is recommended at this time.

SWMU 21 **Spent Catalyst Satellite Accumulation Areas**

Conclusions: These units accumulate spent catalyst fines in 55-gallon steel drums at various locations throughout the facility. The units are situated on gravel-covered soil or cement pavement. The waste is removed within 90 days per current company policy. The threat of release via various pathways is summarized below.

Ground water: Low. The nature of the waste in these units does not pose a threat of release to ground water.

Surface water: Unknown. No information about wastes managed, exact location, or history of release is known.

Air: Low. Although these catalyst fines may be toxic by inhalation, the drums are sealed and are in sound condition. Hence the potential threat to air is low.

On-site soil: The nature of the waste in this unit does not pose a threat of release to ground water.

Recommendations: No further action is recommended at this time.

SWMU 22 **Water Treatment Plant for Boilers**

This unit treats channel water before and after its use as once-through cooling water for cooling the facility's boilers. These sub-unit consists of a water treatment system, a cooling tower, and a boiler. The units appeared to be in sound condition. Sludge splattering was noted on a cooling tower basin berm and exterior wall. Also noted was an unknown deposit on the ground next to this cooling tower. The facility representative indicated that it was lime, although it lie beneath a sulfuric acid product tank. The units have secondary containment in the form of berms.

Ground water: Low. The nature of the waste in this unit does not pose a threat to ground water since a release can be contained before it has the opportunity to enter the ground water.

Surface water: Low. A release can be contained before it has the opportunity to reach the nearest surface water (3/4 mile south).

Air: Low. The nature of this waste in this unit does not pose a threat to air.

Oil-site soil: Low. Any release can be contained before it has the opportunity to enter the soil. However, if deposit located next to cooling tower on ground is something other than lime, a potential release to on-site soil may occur.

Recommendations: Soil sampling is recommended to test deposit found on ground next to cooling unit.

AOC 1 **Asphalt Tank**

Conclusions: During the VSI an oily substance was observed at the base of Tank #51. This unit is a 80,600-barrel asphalt product tank. This unit has a earthen floor.

Recommendations: RAI recommends that soil and ground water sampling be performed for petroleum contamination.

AOC 2 **Underground Fuel Product Storage Tank**

Conclusions: This unit consists of two 4,000-gallon underground metal bulk storage tanks (UST) for dispensing regular (leaded) and unleaded gasoline to company vehicles. These UST were installed in the early 1970s. Since the USTs are approximately 20 years old and they have no secondary containment, leakage of the product may be occurring.

Recommendations: RAI recommends that soil and ground water be sampled for petroleum contamination and that the two tanks be tested for integrity.

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ATTACHMENT A

VISUAL SITE INSPECTION FIELD NOTES

CLARK

CLARK OIL & REFINING CORP.
(CLARK)

BLUE ISLAND TERMINAL
BLUE ISLAND REFINERY

THIS IS RUN AS SEPARATE ENTITY

Blue Island Terminal-Clark oil
Different Clark Division Control
Terminal Loading Out of St. Louis

May Be Not

Still Clark's Property
Loading Propane? Office

BTL - 1985

Residences
Some have been cut by Clark

SRT 8/21/91 ①

½ Mile From Prop Line Are Residences

Metropolitan Water Reclamation District Accross CA SAG Channel. They are Supposed to build a refinery there.

1915 Start up.

Great Lakes Refining Area operated Refining Area and part of tankfield grassy fields elsewhere.

Chem plant built in 1960s

Refinery no changes really with operation

BTL-Chem 1960

Tank Farm 2 - 1970s

Stony or Mosquito Creek
North side of rail-track

West-Rock Paper Company
Recycle Newsprint

Century
Flawed Shapes

SRT 8/21/91 ②

Heavy Industry to the West

Heavy Industry - then residential

CLARK - No wells
Forest Preserves ?

Deep tunnel Well Measuring Depth
Mt. Greenwood INTERCEPTOR TUNNEL Goes to
CALUMET Treatment Plant

Pulaski - Pumps

WIRETON CREEK

electrical substation
½ Edison ½ CLARK

UNINCORPORATED COOK COUNTY
ONLY portions are IN Alsip and Blue
ISLAND

Refinery -
gasoline
fuel oils 2, 6
asphalt
propane
LPG gas
butane
SULFUR - by product product fuel gas
desulfization

Crude unit.
Ψ = Sewer DRAIN on Process
two DRAINS - PARTIAL Segregated
a) oil Ψ
b) Storm H2O ⊕

Storm H2O Discharged to Cal Sag in some cases.

HVGO - Heavy Vacuum Gas Oil So
heavy Vacuum is Needed to have
1# Flash.

Crude Oil - heaters, towers.

Light Vacuum gas oil
heavy oil gas oil
Isomax oil to FCC
gas oil to FCC
asphalt - product

(3) SST 8/21/91

SCT 8/21/91 (4)

Knock out Drums - water is dropped OFF gas line like a line dryer condensation

Desalter - Remove Salts that may Corrode Pipe ~~Hydrolord~~

Water/oil - Electric plates. Emulsion is broken up between H_2O and oil

Oil waste water - not a high ph Material

FCC - fluid catalytic cracker

Fuel Gas is produced Burned in OWN Heaters

C^3 C^4 Gas sent to ALKALINATION UNIT.

⑤ SCT 8/21/91

Product
- Gasoline
- Heavy Naphtha Stripped
- Light Cycle oil
- Heavy Cycle oil
- Centrified Slurry oil

Waste
- Catalyst Fines - sold as Product
- Equilibrium CATALYSTS

Fresh Feed = Gas oil from Crude Unit
- Amer Chem Company
- Sell to Paper Mills
- Sodium Hydroxide

Scrubbers FCC Scrubbed with Sodium Hydroxide

Steam drum Knock out drums - Condextation
- Sour water Stripper - H_2S Sent to treatment internally

Lean gas filter - gas to fuel gas System

Scrubbers are - Water wash

Enclosed System then Sent to drain

Steel pipe for treatment / water lines

SCT 8/21/91 ⑥

HF ALKALATION Unit

Product

ALKALATE - Type of Gasoline
Fuel GAS
LPG
Normal Butane
HydroFlouric Acid
Neutralized - Sodium Hydroxide
Sewered

2 KnockOuts - Coalescers

ISOMAX Unit

Product

Napitha
Isomate Gasoline
Fuel GAS - MAY be sent to DesulFurization Process before Stored as product

Gas
Isomate
Waste

Flash Drum - Volatile and they Vaporized. A Liquid is Formed and CAN Be Drained

(7) SKT 8/21/91

Unifiners - Reduce Naptha Cr Petrol
Remove H_2S

3 UNITS

Basic Same Set UP
Catalyst Regenerated within UNIT

Products

Fuel Gas (Used in Fuel Gas Charge)
Intermediate Plat Former Charge (Reformers)
Isomate Charge

Most goes to Sour Hgt System
Stage Separator can go to SW System or directly to sewer IF Problem EXISTS

Reformers (PlatFormers)

Product

Platformate - Gasoline Prod
Hydrogen Charge to UniFiers

PlatFormers are Regen Dry UNITS

Saturate Gas Plant

Intermediate Unit

Gas Creation

Fuel Gas
Isobuthane
Buthane

SKT 8/21/91 (8)

Steam Knockouts
LPG Scrubbers

Desulfurization Plant

Product
Treated Fuel Gas
Used For burning on site
Liquid Sulfur

Takes Fuel Gas
Scrubb out Sulfur

Open Drain Tank ⇒ Residuals
Sump pump to oil waste water Drain
Reused in Surge tank
Closed Drain TANK - ON SKIDS

Sour Water Stripper
Discharge
1) To Sewer
2) Most sent to Desalter and reused

(9) SRT 5/21/91

SRT 8/21/91

Boiler House
5 Boilers + 1 Reserve together
H2O From River
Desalt it
Use at refinery
Treated Boiler H2O sent to various units for cooling

Tank - Surge Suppression Tank
Process Water Sewers From Refinery Underground to Tank 59

Originally They were near Sulfur Plant

No NPDES PERMIT
Creation for Storm Water Discharge

ABandoned Pipe - Direct to River Once Thru cooling H2O Storm water

Abandoned Before 1974

Process oily water → 59

Storm water → 38 Sump (above ground)
When heavy rain 32 Sump may overflow
it has a weir water flows below oil separated out water deposited in 6" Sewer line Sewer lines also observed tank farms

6" Sewer cut Fall Sump pump up to Tank 59
weir set up in case of heavy rain (10)

C. Sewer overflow. Each dike is drained Separately.

API Separators - bottom are KOSI

Oil floated from this piped to 60s tanks and recycled. Separators are in ground.

API Separator bottoms

20 yrs old?
hauler with trucks
Vacuum trucks

Overflow pit (behind Separator) - Tank 59
also overflow INTO Concrete pit.

KOSI - bottoms
PCI - East Chicago
EWR
Evans - Cottage Grove
Terre Haute

Transporters are Subcontractors

Sludge from API up to 1989

SET 8/21/91

1990 upgrade separators
installed paddles and pumps

Sumps Pump waste sludge into above ground tank number 60 sludge storage tank

60s - recyclers

Tank 63 and 63 collect oil

phase separators

Solids will fall to bottom of tank

oil - recycled back to crude unit

water - back to API separator pit

solids - pumped directly into trucks
15,000 - 20,000 a month
3 trucks a month

KOH9 Waste

They have not been cleaned in 25 years

Oil has dyes to overflow pit.
Sloped toward sump pump

Pit has sump pump which pumps into Tank 59

SET 8/21/91

Slop oil - vacuum transported to overflow pit

Sludge tanks sits on stilts
It is a separator tank. Oil float sent to 60s tank.

Sludges are then sent to 60s tank also for recycling

As particulates break down. The middle layer goes to overflow pit and then in tank 59

Water goes thru overflow with wier and then put into the sedi/water-unit which is a separator also. Oil is pumped back to the 60s tank.

Clean water discharge to Metro Sewer Systems.

Once every 2 years this tank bottoms is vacuumed pumped directly into truck.

actually twice in one year.

the float is K048 + API Bottoms???

Part A did not understand what was it all about.

then sent to Tank 59

Sed. buildup within overflow pit is tanks out 55 gallon drums once in 20 years. Unleaded tank bottoms. Oil could recovered shoveled out otherwise

Drum - AFGANAX - 80 Drum 99 ↓
B separate

Overpacks were used since pet barrels did not originally meet standards

Once every 3 years plant is shut down for 2 or 3 weeks for maintenance etc.

Catalyst recovery - manifested under special waste regenerate it

Crin-net Louisiana
↓
Isomax
the rest are sold. Waste regenerated

drier Catalyst

aluminum Catalyst - land disposal directly from unit vacuum - dumped and disposed of at Cid. Once every 2 or 3 years.

Sand used to clean up asphalt spill.

Sulfur, Sand, Soil

Pit used to hold sulfur independent Waste CID

Sulfur pits - maintenance

Very infrequently once every 3 yrs 20 yds.

Catalyst the same

Asphalt Spills means Tanks 52 + Tanks 38 large volume. (waste)

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Digging for sewers etc. get disposal of in same manner.

Oil dry. used

IF Benzene is too high then it has to be figured differently

Tanks 71 and 72 owned, permitted and regulated by BTL

leased tanks

Spill within process unit

Sewer Caught

Asphalt

gas oil - Creek.

Stormwater runoff into Creek blocked off in CWA.

1990	Tank 52	Asphalt Leakage onto soil scraped asphalt soil	
	Tank 38 - Overflow		
1989	Tank 52	Asphalt/Soil	375 yds
		Asphalt spill on soil from tanks pump seal	

SRT 5/21/91

M-June 1991 Tank 38 - overflow
200 yd3
Wheel Barrel, foot or toe
OFF soil/spill

Fire Training
ALSIP
Blue Island

Fire of FLANGE

Maintenance
A) Safety Kleen

B) 1,1,1 Trichloro Dip tank

- Second Containment
- Recycle By Safety Kleen
- Rags
- Rags reused when Dry

Electrical Instrument get
1,1,1 Trichloro First when Clear

SMT 8/21/91

(17)

3 55 gallon drums of waste

Dikes in Zone filled with Stormwater
Heated discharge water flowed into
Solidified into fuel oil gasoline. Fuel
oil dissolved into this flowed into Creek
Storm Sewer
Hazardous Storage area

Northwest Properties

Area #3 Construction Rubble
no work
no process

Browning-Ferris Chemical Plant
Non-Hazardous
Flatbed Truck Winthrop Harbor
70 Drums
Resins

Cooling Tower sludge no longer has
bottoms now goes through drain and
then thru water treatment system.

SMT 8/21/91

(18)

Once every 3 years. 9000 gallons
Vacuum pumped. 1985

liquidy Sludge, sent to CID until
Illinois said no liquids

90 Safety Kleen cleans out
Solvent

In past 1,1,1 TCA used all the time.
Oil in the bottom of drums is used.

1% Contamination for Chlorine ~~Contaminate~~
Alternative will take it

FOOL Must Be Less than 1%

Mixed with Tanks 605

3 diptank

Spray Cleaners

approx 10 drums of waste a year

SRT 8/21/91

Lube Oils - Some can be

Asbestos - Central Illinois landfill
removal pipeline

double box, plastic
hopper - roll off box
"Gruum"
Garbage and trash from
refinery

278 employees
3 Shifts
24 hours a day
24 hour security on site

Scrap Resin at Former Chemical
Total Title Transport

Clark Oil and Refinery Corporation
Blue Island Refinery
Oil + Water Separator
TSD ~~Generator~~/under Tanks Trucks

The 200 tank field fed by underground
4½ MIL GAL 100ft Diameter
50ft high

SRT 8/21/91

Dike fields at Terminals Stormwater Implies.

One of tanks contain gas oil (Vasiline) has to be heated to move

dike fields - valve

Tank 804 had a leak of gas oil. Spillage. Sewer contaminated flowed into sewer. January Froze. Sewage was assumed closed soil was cleaned

Last 7 years no leaded gas on site

1981 - Leaded tank bottom cleaned. Samples Non hazardous but RCRA tested

Independent Waste Systems Gary In
8 yd 3

(21)

SAT 8/21/91

CID LANDFILL - Calumet City
Chemical Waste Mgmt.

When was generated started?
When they close tanks

TANK 46 1 Million Gallon Tank
K052

Vapor Free
Cleaned for entry use
air blowing
Shoveled
Put in Lined (plastic) 15 yd roll off box
box is covered
dike field was not very large
moved from 46 to 101
SAT No Permit Came In.

Catalyst - Each unit has one when it becomes used
Some used in Process
Continuously Regenerated
Sometimes Sold to Customers
Some are Land Disposed

Aluminum

SAT 8/21/91

(22)

Wastewater

Sump, Pump
Pump To API Seperator
oil skimmed off
OIL Recun
H_2O - Dissolved Air Floatation Unit
Then it goes to Metro Sanitary
District
User Charge + Parameters
as under CWA and their own
test

TSS
BOD

H_2O Monitor Sometimes 2 weeks at
a time by District

Wastewater Hazardous Constituents
API Separator Bottoms
Benzene

K052 - Leaded Tank bottoms

Crude oil brought in by Pipeline
1) Chicago + offshore Louisiana
2) West Shore Pipeline brings into plant
3) Arco pipeline

Clark owns that sends fuel to Hammond

Chicago pops up in tank farm
ARCO " " " "

West Shore comes up in bottom left hand
Comes off our map

Outside Pipeline = internal pipeline pumped
into tank farms. Pipes go underground
to refinery. Then they go to topping
unit (1st).

Then it goes to three different processes
FCC unit gas
alkalination
hydrocracker - fuel oil into

Asphalt - must be kept hot
have insulation on

Round tanks are Butane spheres.

5-Tank 59 3.0 ppm

16-7 51 oil ground

18 12.3
Flow rate 500gal/min each one

19- DAF Skimmer

20
Deep Tunnel lies under Cal Sag
Observation well for deep Terminals
to measure dept

Tank 46 Leaded Tank Bottoms

Railcare
City water meters

(25) SKT 8/21/91

terminal covers past waste areas
Tank 801 + Roll off Tank
BTL Piles of debries
Lots to once had resin drum
Storage

Warehouse pre-stress concrete
Catalyst outside 4x4x5 ft.
Shout into containers and delivered
to Louisiana. Once every 3 years.

6.1 BTL
Sludge taken out of tank 65
Sample lot. 66

1,1,1 TCA Used Waste - Safety Kleen
PCB Waste - 5 gal

East
Parts Washer - Garage
30 gallon
electric pumped into barrels and
Stored at (11)
(11) Water trench in Stalls.
(16) East

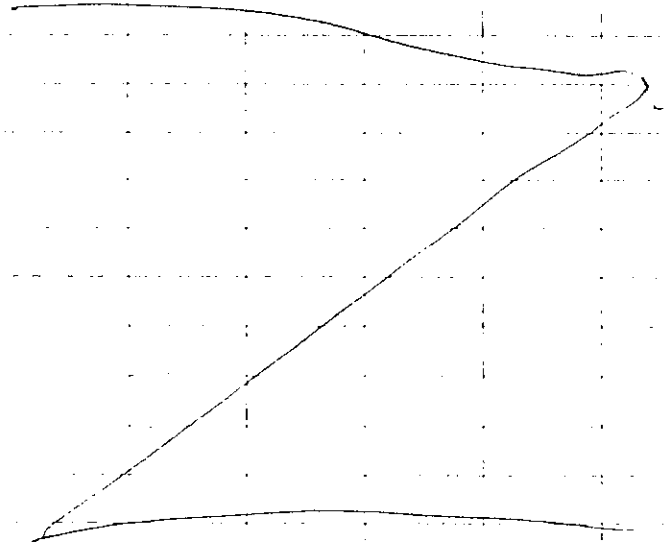
SKT 8/21/91

(2) Knock OFF
Heated Water

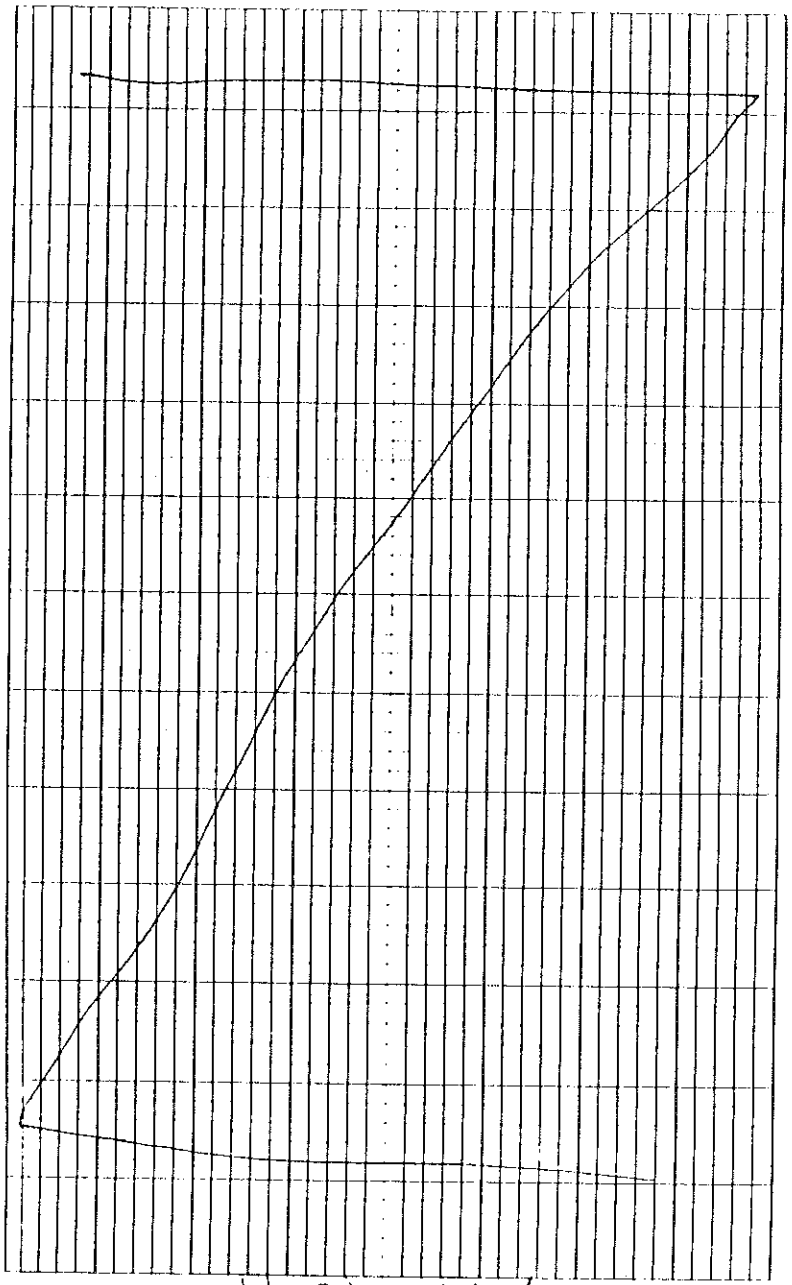
Process water

FCC Area 1.9 PPM

Hydro Flouric Acid Area 4.1



SMT 8/31/91



SMT 8/31/91